# IMPLEMENTATION ACTION STEPS for the WAKE FOREST OPEN SPACE AND GREENWAY PLAN

#	Task	Lead Department	<b>Support Department</b>	Details	Phase	Reference
1	Complete design and construction of the Dunn Creek Greenway trail, from the NC98 Bypass to the Smith Creek Soccer Complex	Parks & Recreation	Planning Department + Engineering	The Town has targeted this section along the Dunn Creek tributary of Smith Creek for the construction of its next trail. The segment extends north from the Smith Creek Soccer Center to the NC 98 by-pass, where the Town and DOT have already installed a pedestrian culvert.	Phase One (2010)	Cut-sheet #
2	Extend the Smith Creek Greenway trail south to connect to Thornrose, Dansforth, Sanford Creek trail and Heritage elementary, middle, and high schools.	Planning Department	Parks & Recreation and Engineering	With Safe Routes to School (SRTS) funds, and an equivalent Town match in funds, this trail could produce a safe transportation route for hundreds of students living in Dansforth, Thornrose, Heritage South, and Heritage Wake Forest. Safe access needs to be provided along, across, and underneath Rogers Road. An at-grade crossing is located at the signalized intersection of Rogers Road and Franklin Street. An underpass needs to be provided when the Rogers Road bridge over Smith Creek is reconstructed. The future bridge must also accommodate bicyclists and pedestrians over the bridge.	Phase One (2011)	Cut-sheet #
3	Propose a bond fund to complete the Wake Forest's portions of the Greenway Loop.	Planning Department	Parks & Recreation and Engineering	Eighty-five percent of people who filled out comment forms related to this Plan Update said they would support such a measure. Calculate cost-estimates from this plan and the 2008 Bicycle Plan to determine total required funding. Also consider funding <i>all</i> phase one and phase two projects in a single bond measure.	Phase One (Begin 2009)	* '
4	Complete design and construction of the Dunn Creek Greenway trail, from the NC 98 Bypass to Oak Grove Church Road.	Planning Department	Parks & Recreation and Engineering	This section is the logical next step, continuing the trail from the NC 98 Bypass, and connecting to the proposed Wait Avenue bicycle lanes and sidewalks to downtown. If continued trail construction to Flaherty Park is not expected to be immediate, then provide a trailhead at Oak Grove Church Road to 'anchor' the end of the trail in the short term.	Phase One (2012)	Cut-sheet #
5	Complete design and construction of the Dunn Creek Greenway trail, from Oak Grove Church Road to Flaherty Park.	Planning Department	Parks & Recreation and Engineering	This section connects from Oak Grove Church Road to Flaherty Park, completing a trail all the way to the Smith Creek Soccer Complex, and (depending on the status of the Rogers Road bridge improvements) to Heritage High School.	Phase One (2013)	Cut-sheet #
6	Develop bicycle and trail signage and wayfinding system.	Planning Department	Parks & Recreation and Engineering	A wayfinding system is recommended only after completing several key bicycle and pedestrian projects, otherwise the system would need an immediate update. After completion of the above trail segments (along with progress from the implementation of the 2008 Bicycle Plan), a wayfinding system should be designed that is flexible enough to make updates as new projects are completed.	Phase One (2013)	Appendix B
7	Complete design and construction of the Smith Creek Greenway trail, from Sanford Creek to Ligon Mill Road.	Planning Department	Parks & Recreation and Engineering	By completing the northern portions of the Smith Creek and Dunn Creek Greenway trails, this remaining portion will be 'book-ended' with Raleigh's Neuse River Trail, creating popular demand and political pressure to complete this section. Work with Wake County and landowners to acquire greenway easements on the two remaining parcels necessary for corridor connectivity (near the Margaret's pond and Dansforth subdivisions).	Phase One (2014)	Cut-sheet #
8	Complete design and construction of the Smith Creek Greenway trail, from Ligon Mill Road to Burlington Mill Road.	Planning Department	Parks & Recreation and Engineering	This would be the final link connecting Downtown Wake Forest to the Neuse River Trail (which doubles as the North Carolina Mountains-to-Sea Trail and connects to the entire City of Raleigh greenway system). Work with Wake County to acquire a greenway easement from the owner/developer of the one remaining parcel necessary for corridor connectivity.	Phase One (2015)	Cut-sheet #
9	Complete design and construction of the Richland Creek Greenway trail, from Harris Road to Stadium Drive.	Planning Department	Parks & Recreation and Engineering	This portion of the Richland Creek Greenway is a top priority for the corridor because it would use existing public open space to connect the Olde Mill Stream Greenway to the proposed trails of Joyner Park and Wake Forest-Rolesville High School. Proposed bicycle lanes and sidewalks (from the 2006 Pedestrian Plan and the 2008 Bicycle Plan) would connect the southernmost portion of this trail segment to Downtown Wake Forest.	Phase Two (2016)	Cut-sheet #
10	Complete design and construction of the Sanford Creek Greenway trail, from the Smith Creek Greenway to Marshall Farm Road.	Planning Department	Parks & Recreation and Engineering	This portion of the Sanford Creek Greenway would connect the Smith and Dunn Creek Greenways to the existing portions of the Sanford Creek Greenway. The redesign and reconstruction of Forestville Road should monitored closely for inclusion of bicycle and pedestrian accommodations to connect the trail across the roadway. An underpass is recommended, per Town policy.	Phase Two (2017)	Cut-sheet #
11	Complete construction of the Sanford Creek Greenway trail, from the west end of the existing boardwalk on Sanford Creek Greenway to Rogers Road.	Planning Department	Parks & Recreation and Engineering	This portion of the Sanford Creek Greenway would eventually connect the Wake Forest Greenway system to the Rolesville Greenway system. The redesign and reconstruction of Rogers Road should monitored closely for inclusion of bicycle and pedestrian accommodations to connect the trail across the roadway. An underpass is recommended, per Town policy.	(under construction)	Page 4-4
12	Complete design and construction of the Richland Creek Greenway trail, from Stadium Drive to the Bennett Park Neighborhood.	Planning Department	Parks & Recreation and Engineering	This is the next logical step for the Richland Creek Greenway, as it would build off of the above recommendation, extending the trail to a network of subdivisions just southwest of Downtown Wake Forest.	Phase Two (2018)	Cut-sheet #
13	Complete design and construction of the Richland Creek Greenway trail, from the Bennett Park Neighborhood to the Villas at Caveness Farms (US-1/Capital Blvd)	Planning Department	Parks & Recreation and Engineering	This section of the Richland Creek Greenway would be completed towards the end of phase one to allow more time for coordination with the City of Raleigh and NCDOT in either providing an underpass for the trail at US-1/Capital Blvd (as recommended) or at a minimum, providing pedestrian accommodations at the intersection of US-1/Capital Blvd and the NC 98 Bypass.	Phase Two (2019)	Cut-sheet #
14	Complete design and construction of the Richland Creek Greenway trail, from the north end of the Olde Mill Stream Greenway to the Wake Forest Town Limits.	Planning Department	Parks & Recreation and Engineering	Although this portion of the Richland Creek Greenway is recommended last, it should be moved up in priority if any other sections are held up for any reason. The public open space along the sewer corridor in this section would connect to the existing Olde Mill Stream Greenway.	Phase Two (2020)	Cut-sheet #
15	Update the 2009 Plan	Planning Department	Parks & Recreation and Engineering	After ten years (2010-2020), this plan should be thoroughly evaluated and updated according to progress made on implementation. A key step would be developing thorough recommendations for Phase Three projects.	Phase Three (2020)	-

# COST ESTIMATE FOR CUT SHEET

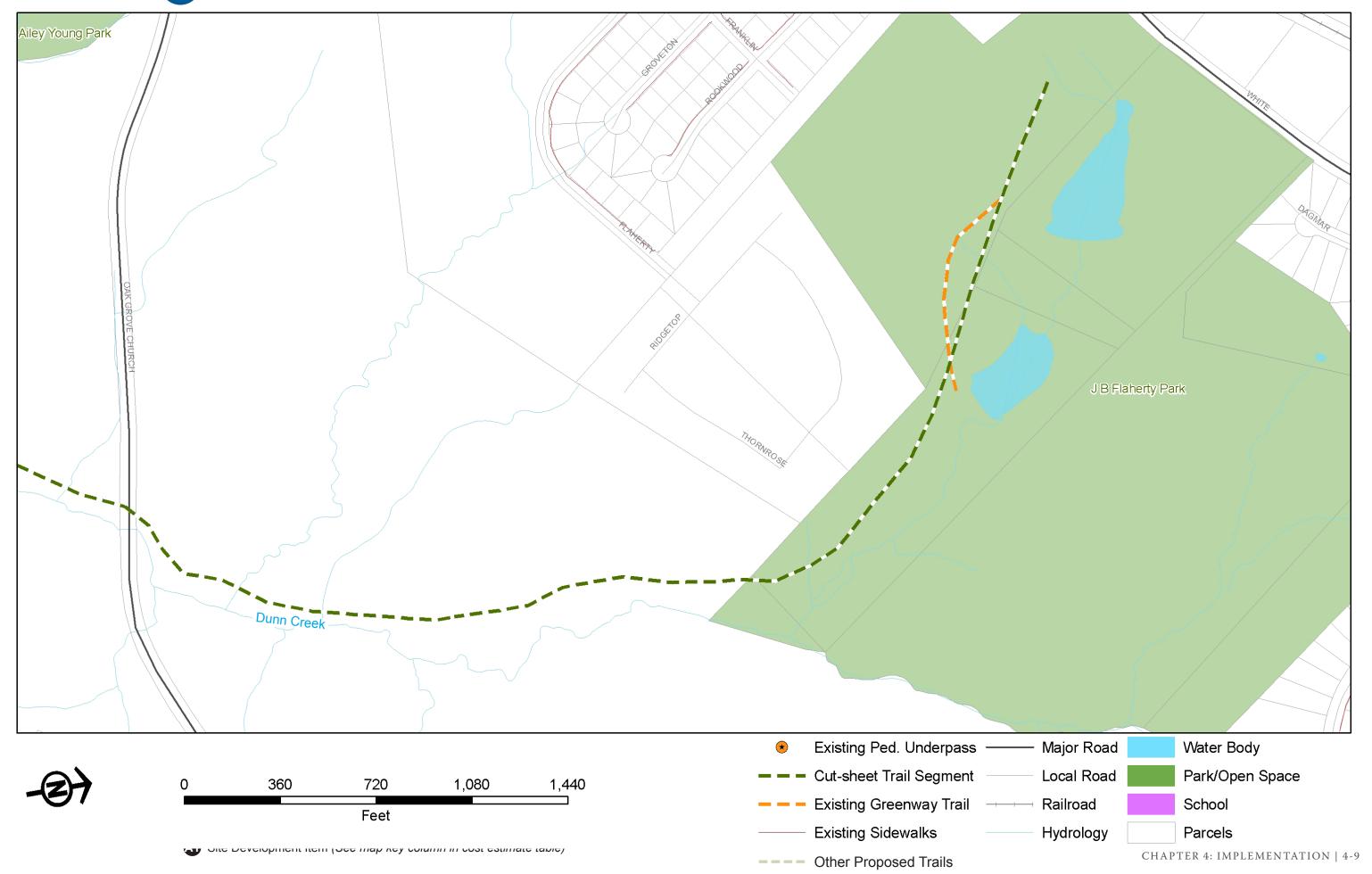


# **DUNN CREEK CORRIDOR**

### (From Flaherty Park to Oak Grove Church Road)

р Кеу <b>А</b>	Demolition	Quantity	Cost	Unit	Subtota
<b>41</b>	Clearing and grubbing understory (20' wide)	0	\$0.25	sf	\$0.0
۹2	Dumping Fees @ 6% of Demolition total		,	6%	\$0.0
				Subtotal	\$0.0
	Site Development	Quantity	Cost	Unit	Subtota
	Site Development	Quantity	Cost	Onic	Subtota
В	Off-Road Facility (6,335 lf)				
B1	Temporary tree protection/silt fence (both sides)	9,600	\$2.00	lf	\$19,200.0
B2	Trail grading (0-5 cu ft/lf)	4,800	\$3.30	lf	\$15,840.0
В3	10' wide multi-use asphalt trail	4,800	\$50.00	lf	\$240,000.0
B4	2' wide gravel shoulder (both sides)	9,600	\$6.60	lf	\$63,360.0
B5	Wooden or recycled synthetic material boardwalk	0	\$250.00	lf	\$0.0
B6	Small Bike/Ped Bridge	0	\$1,350.00	lf	\$0.0
B7	Drainage culvert (36" reinforced concrete pipe)	0	\$44.00	lf .	\$0.0
B8 B9	Seeding or mulching trail edges (5' both sides)  Geotextile fabric	48,000 4,800	\$0.13 \$1.50	sf If	\$6,240.0 \$7,200.0
		1,000	Ψ1.50		ψ7,200.0
С	On-Road Facility		+4.60	16	+0.6
C1	Crosswalk: Striping (High Visibility Paint)	0	\$1.60	lf If	\$0.0
C2	Crosswalk: Striping (High Visibility Thermo)	0	\$4.80	lf	\$0.0
C3	Ped-activated overhead warning lights	0	Unknown Unknown	ea	\$0.0
C4	Median pedestrian refuge island	0	UNKNOWN	ea	\$0.0
D	Utilities				
D1	Solar powered light	0	\$5,900.00	ea	\$0.0
D2	Solar powered light pole	0	\$1,420.00	ea	\$0.0
D3	Emergency phones	0	\$2,730.00	ea	\$0.0
E	Signage				
E1	Mile Markers	1	\$220.00	ea	\$220.0
E2	Trail and street regulatory/warning signs	0	\$220.00	ea	\$0.0
E3	Directional signs  Educational signs	1 0	\$220.00 \$330.00	ea	\$220.0 \$0.0
E4	Lucational signs	0	\$330.00	ea	<b>\$</b> 0.0
F	Site Amenities				
F1	Benches (2 per mile recommended)	2	\$900.00	ea	\$1,800.0
F2	Bicycle rack (at trailheads)	1	\$225.00	ea	\$225.0
F3	Drinking fountains, with pet fountain (1/mile) Picnic tables/ tables (at trailheads)	1 1	\$2,000.00 \$550.00	ea	\$2,000.0 \$550.0
F4 F5	Trash receptacles (32-gallon, steel)(at trailheads)	1	\$300.00	ea ea	\$300.0 \$300.0
F6	Bollards (2 per trail/road intersection)	2	\$600.00	ea	\$1,200.0
F7	Parking (10-car lot)(at trailheads)	1	\$22,000.00	ea	\$22,000.0
F8	Parking (20-car lot)(at trailheads)	0	\$55,000.00	ea	\$0.0
				Subtotal	\$380,355.0
	Decien	0	Co-t		
G	Design Wetlands Deliniation	Quantity 4,800	Cost \$1.00	Unit	<b>Subtot</b> \$4,800.0
G1	Geotechnical Testing	4,800	\$1.00	If If	\$4,800.0 \$14,400.0
G2 G3	Construction Documents @ 12 % of Dev. Cost	4,800	\$3.00	12%	\$45,642.6
			1	C 1.1.1.1	
				Subtotal	\$04,842.0
	Subtotals			Subtotal	
A	Demolition			Subtotal	\$0.0
В	Demolition Off-Road Facility			Subtotal	\$0.0 \$351,840.0
B C	Demolition Off-Road Facility On-Road Facility			Subtotal	\$0.0 \$351,840.0 \$0.0
B C D	Demolition Off-Road Facility On-Road Facility Utilities			Subtotal	\$0.0 \$351,840.0 \$0.0 \$0.0
B C D	Demolition Off-Road Facility On-Road Facility Utilities Signage			Subtotal	\$0.0 \$351,840.0 \$0.0 \$440.0
B C D E	Demolition Off-Road Facility On-Road Facility Utilities Signage Site Amenities			Subtotal	\$0.0 \$351,840.0 \$0.0 \$440.0 \$28,075.0
B C D	Demolition Off-Road Facility On-Road Facility Utilities Signage Site Amenities Design			Subtotal	\$0.0 \$351,840.0 \$0.0 \$0.0 \$440.0 \$28,075.0 \$64,842.6
B C D E	Demolition Off-Road Facility On-Road Facility Utilities Signage Site Amenities Design SUBTOTAL				\$64,842.6 \$0.0 \$351,840.0 \$0.0 \$0.0 \$440.0 \$28,075.0 \$64,842.6 \$445,197.6
B C D E	Demolition Off-Road Facility On-Road Facility Utilities Signage Site Amenities Design			Subtotal	\$0.6 \$351,840.6 \$0.6 \$0.6 \$440.6 \$28,075.6 \$64,842.6

Note: Does not include the following: land acquisition, potential rock and unsuitable soils excavation, permitting fees, mobilization, and taxes.



# COST ESTIMATE FOR CUT SHEET

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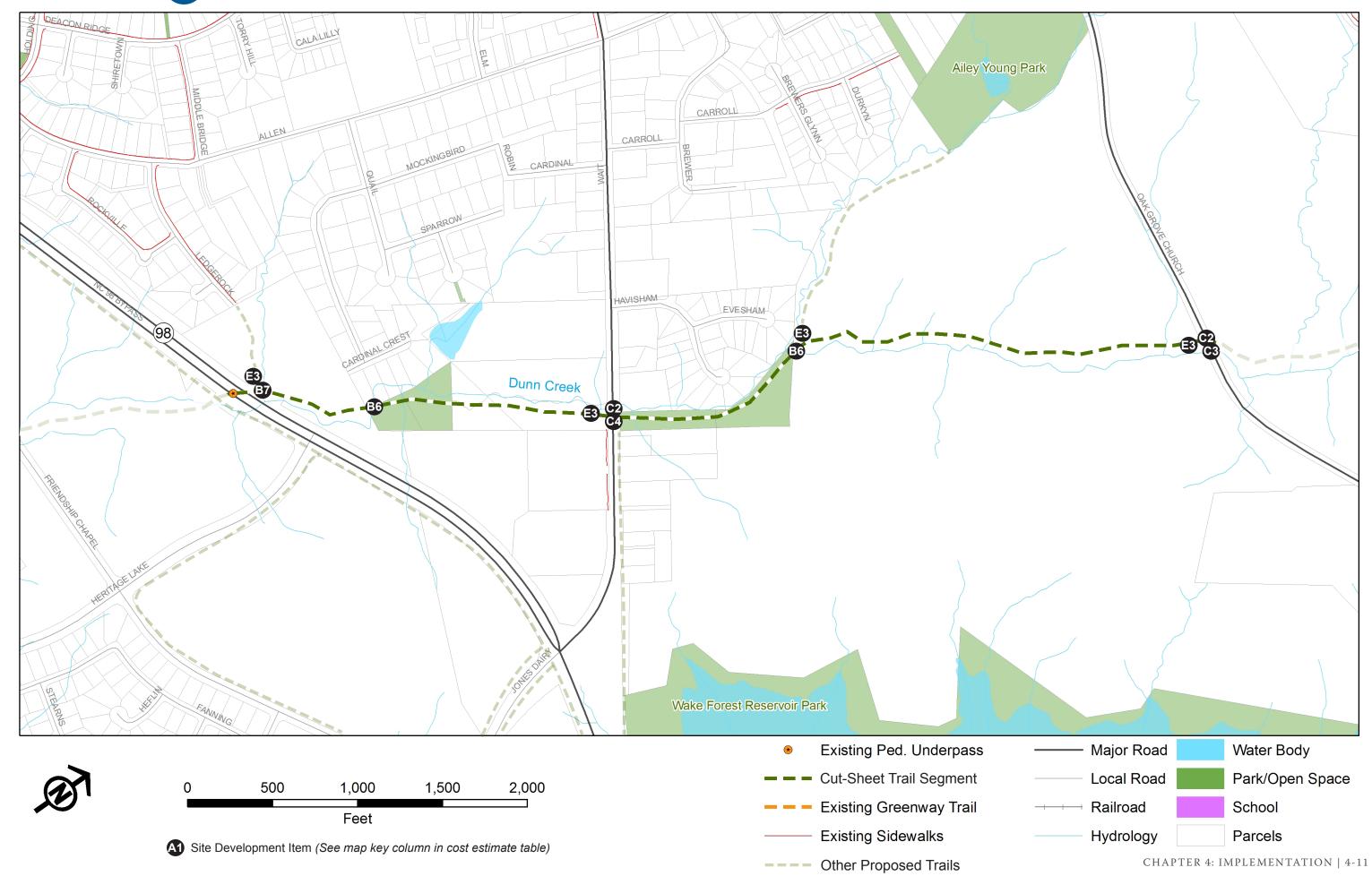
# **DUNN CREEK CORRIDOR**

#### (From Oak Grove Church Road to NC 98 Bypass)

Α	Demolition	Quantity	Cost	Unit	Subtota
A1	Clearing and grubbing understory (20' wide)	0	\$0.25	sf	\$0.00
A2	Dumping Fees @ 6% of Demolition total			6%	\$0.00
				Subtotal	\$0.00
	Site Development	Quantity	Cost	Unit	Subtota
D	Off-Road Facility (6,335 lf)				
<b>B</b> B1	Temporary tree protection/silt fence (both sides)	12,000	\$2.00	If	\$24,000.00
B2	Trail grading (0-5 cu ft/lf)	6,000	\$3.30	If	\$19,800.00
B3	10' wide multi-use asphalt trail	6,000	\$50.00	if	\$300,000.00
B4	2' wide gravel shoulder (both sides)	12,000	\$6.60	lf	\$79,200.00
В5	Wooden or recycled synthetic material boardwalk	0	\$250.00	lf	\$0.00
В6	Small Bike/Ped Bridge (2)	40	\$1,350.00	lf	\$54,000.00
В7	Drainage culvert (36" reinforced concrete pipe)	15	\$44.00	lf	\$660.00
B8	Seeding or mulching trail edges (5' both sides)	60,000	\$0.13	sf	\$7,800.00
В9	Geotextile fabric	6,000	\$1.50	If	\$9,000.00
С	On-Road Facility				
C1	Crosswalk: Striping (High Visibility Paint)	0	\$1.60	lf	\$0.00
C2	Crosswalk: Striping (High Visibility Thermo)	48	\$4.80	lf	\$230.40
C3	Ped-activated overhead warning lights	1	Unknown	ea	\$0.00
C4	Median pedestrian refuge island	1	Unknown	ea	\$0.00
	Utilities				
<u>D</u>	Solar powered light	0	¢E 000 00		\$0.00
D1	Solar powered light pole	0	\$5,900.00	ea	\$0.00
D2 D3	Emergency phones	0	\$1,420.00 \$2,730.00	ea ea	\$0.0
			427700.00	54	Ψ0.0
E	Signage				
E1	Mile Markers	2	\$220.00	ea	\$440.00
E2	Trail and street regulatory/warning signs	7	\$220.00	ea	\$1,540.00
E3 E4	Directional signs  Educational signs	4 0	\$220.00 \$330.00	ea ea	\$880.00 \$0.00
	2 data data da		ψ333.03	54	40.00
F	Site Amenities				
F1	Benches (2 per mile recommended)	2	\$900.00	ea	\$1,800.00
F2	Bicycle rack (at trailheads)	0	\$225.00	ea	\$0.00
F3	Drinking fountains, with pet fountain (1/mile)	1	\$2,000.00	ea	\$2,000.00
F4	Picnic tables/ tables (at trailheads)  Trash receptacles (32-gallon, steel)(at trailheads)	0	\$550.00 \$300.00	ea	\$0.00 \$0.00
F5 F6	Bollards (2 per trail/road intersection)	4	\$600.00	ea ea	\$2,400.00
F7	Parking (10-car lot)(at trailheads)	0	\$22,000.00	ea	\$0.00
F8	Parking (20-car lot)(at trailheads)	0	\$55,000.00	ea	\$0.0
				Subtotal	\$503,750.40
G	Design	Quantity	Cost	Unit	Subtota
G1	Wetlands Deliniation	6,000	\$1.00	lf	\$6,000.0
G2 G3	Geotechnical Testing Construction Documents @ 12 % of Dev. Cost	6,000	\$3.00	15%	\$18,000.00 \$60,450.0
	Construction Documents & 12 % of Devi cost				
	Subtotals			Subtotal	\$84,450.0
Α	Demolition				\$0.00
В	Off-Road Facility				\$494,460.00
С	On-Road Facility				\$230.4
D	Utilities				\$0.00
E	Signage				\$2,860.0
F	Site Amenities				\$6,200.0
G	Design				\$84,450.0
	SUBTOTAL				\$588,200.4
	Contingency (15% of total)			15%	\$88,230.0

Note: Total does not include land acquisition, potential rock and unsuitable soils excavation, permitting fees, mobilization, taxes, or any other item not listed above.

4-10 | CHAPTER 4: IMPLEMENTATION



## COST ESTIMATE FOR CUT SHEET

3

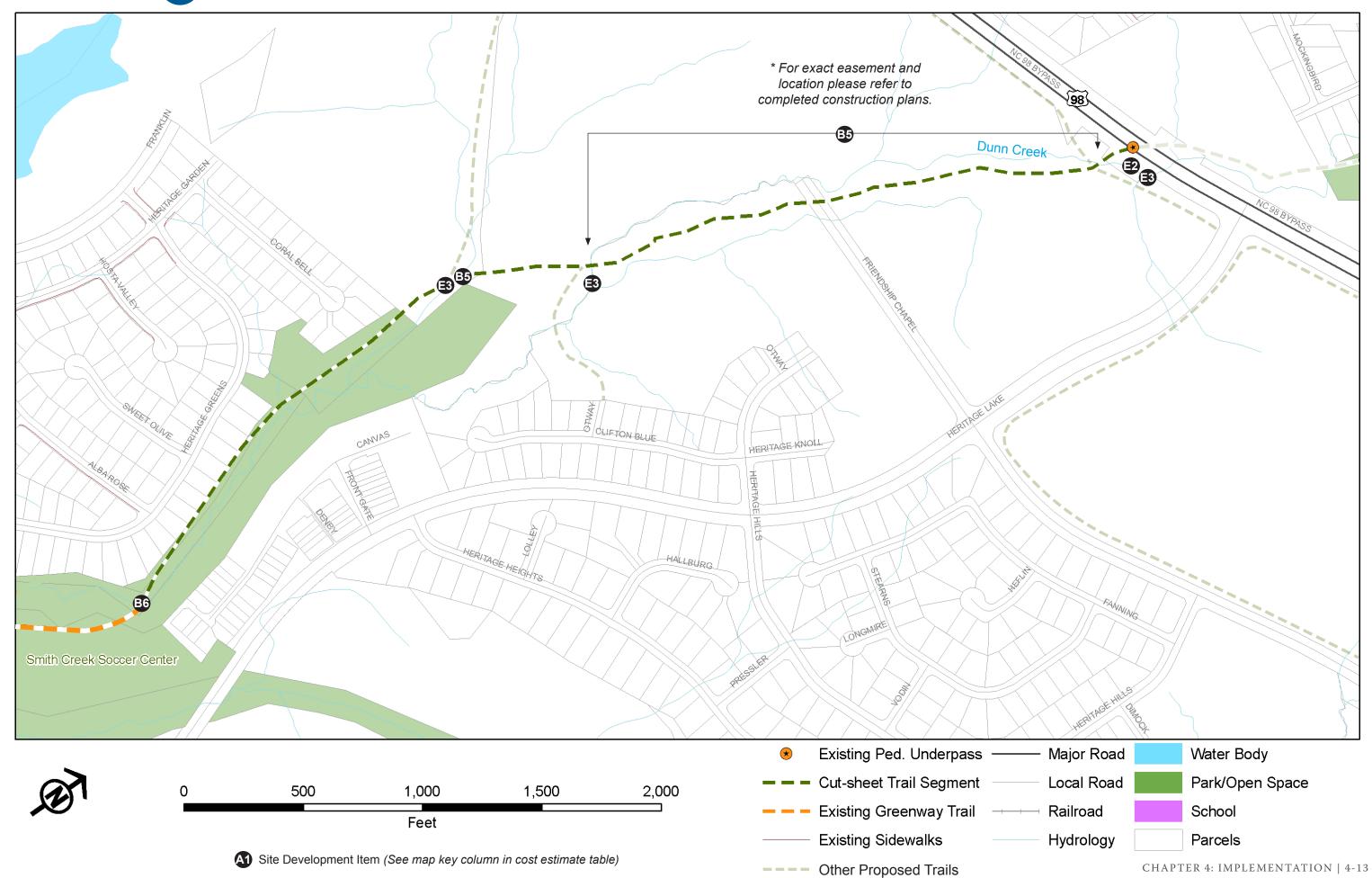
# **DUNN CREEK CORRIDOR**

#### (From NC 98 Bypass to the Smith Creek Soccer Complex)

Α	Demolition	Quantity	Cost	Unit	Subtota
۹1	Clearing and grubbing understory (20' wide)	0	\$0.25	sf	\$0.0
A2	Dumping Fees @ 6% of Demolition total			6%	\$0.0
				Subtotal	\$0.0
	Site Development	Quantity	Cost	Unit	Subtot
В	Off-Road Facility (6,335 lf)				
B1	Temporary tree protection/silt fence (both sides)	4,850	\$2.00	If	\$9,700.0
B2	Trail grading (0-5 cu ft/lf)	2,425	\$3.30	If	\$8,002.5
B3	10' wide multi-use asphalt trail	2,425	\$50.00	If	\$121,250.0
B4	2' wide gravel shoulder (both sides)	4,850	\$6.60	lf If	\$32,010.0
B5	Wooden or recycled synthetic material boardwalk	2,425	\$250.00	lf	\$606,250.0
В6	Small Bike/Ped Bridge (1)	30	\$1,350.00	lf	\$40,500.0
B7	Drainage culvert (36" reinforced concrete pipe)	0	\$44.00	lf	\$0.0
B8	Seeding or mulching trail edges (5' both sides)	24,250	\$0.13	sf	\$3,152.5
B9	Geotextile fabric	2,425	\$1.50	lf	\$3,637.5
С	On-Road Facility				
C1	Crosswalk: Striping (High Visibility Paint)	0	\$1.60	lf	\$0.0
C2	Crosswalk: Striping (High Visibility Thermo)	0	\$4.80	lf	\$0.0
C3	Ped-activated overhead warning lights	0	Unknown	ea	\$0.0
C4	Median pedestrian refuge island	0	Unknown	ea	\$0.0
D	Utilities				
D1	Solar powered light	0	\$5,900.00	ea	\$0.0
D2	Solar powered light pole	0	\$1,420.00	ea	\$0.0
D3	Emergency phones	0	\$2,730.00	ea	\$0.0
E	Signage				
E1	Mile Markers	1	\$220.00	ea	\$220.0
E2	Trail and street regulatory/warning signs	1	\$220.00	ea	\$220.0
E3	Directional signs	3	\$220.00	ea	\$660.0
E4	Educational signs	1	\$330.00	ea	\$330.0
F	Site Amenities				
F1	Benches (2 per mile recommended)	2	\$900.00	ea	\$1,800.0
F2	Bicycle rack (at trailheads)	0	\$225.00	ea	\$0.0
F3	Drinking fountains, with pet fountain (1/mile)	1	\$2,000.00	ea	\$2,000.0
F4	Picnic tables/ tables (at trailheads)	0	\$550.00	ea	\$0.0
F5	Trash receptacles (32-gallon, steel)(at trailheads)  Bollards (2 per trail/road intersection)	0	\$300.00	ea	\$0.0
F6 F7	Parking (10-car lot)(at trailheads)	0	\$600.00 \$22,000.00	ea ea	\$0.0 \$0.0
F8	Parking (10-car lot)(at trailheads)	0	\$55,000.00	ea	\$0.0 \$0.0
				Subtotal	\$829,732.5
_	Docion	Ourant't	Cost		
G	<b>Design</b>   Wetlands Deliniation	Quantity 2,425	<b>Cost</b> \$1.00	Unit If	<b>Subtot</b> \$2,425.0
G1	Geotechnical Testing	2,425	\$3.00	If	\$2,425.0 \$7,275.0
G2 G3	Construction Documents @ 12 % of Dev. Cost	2,423	\$3.00	12%	\$99,567.9
				Subtotal	\$109,267.9
	Subtotals			Subtotal	Ψ100,207.3
A	Demolition				\$0.0
В	Off-Road Facility				\$824,502.5
_	On-Road Facility				\$0.0
С	Utilities				\$0.0
D	1 - <del></del>				\$1,430.0
	Signage				
D	Signage Site Amenities				\$3,800.0
D E					\$3,800.0 \$109,267.9
D E F	Site Amenities			15%	

Note: Does not include the following: land acquisition, potential rock and unsuitable soils excavation, permitting fees, mobilization, and taxes.

4-12 | CHAPTER 4: IMPLEMENTATION



# COST ESTIMATE FOR CUT SHEET



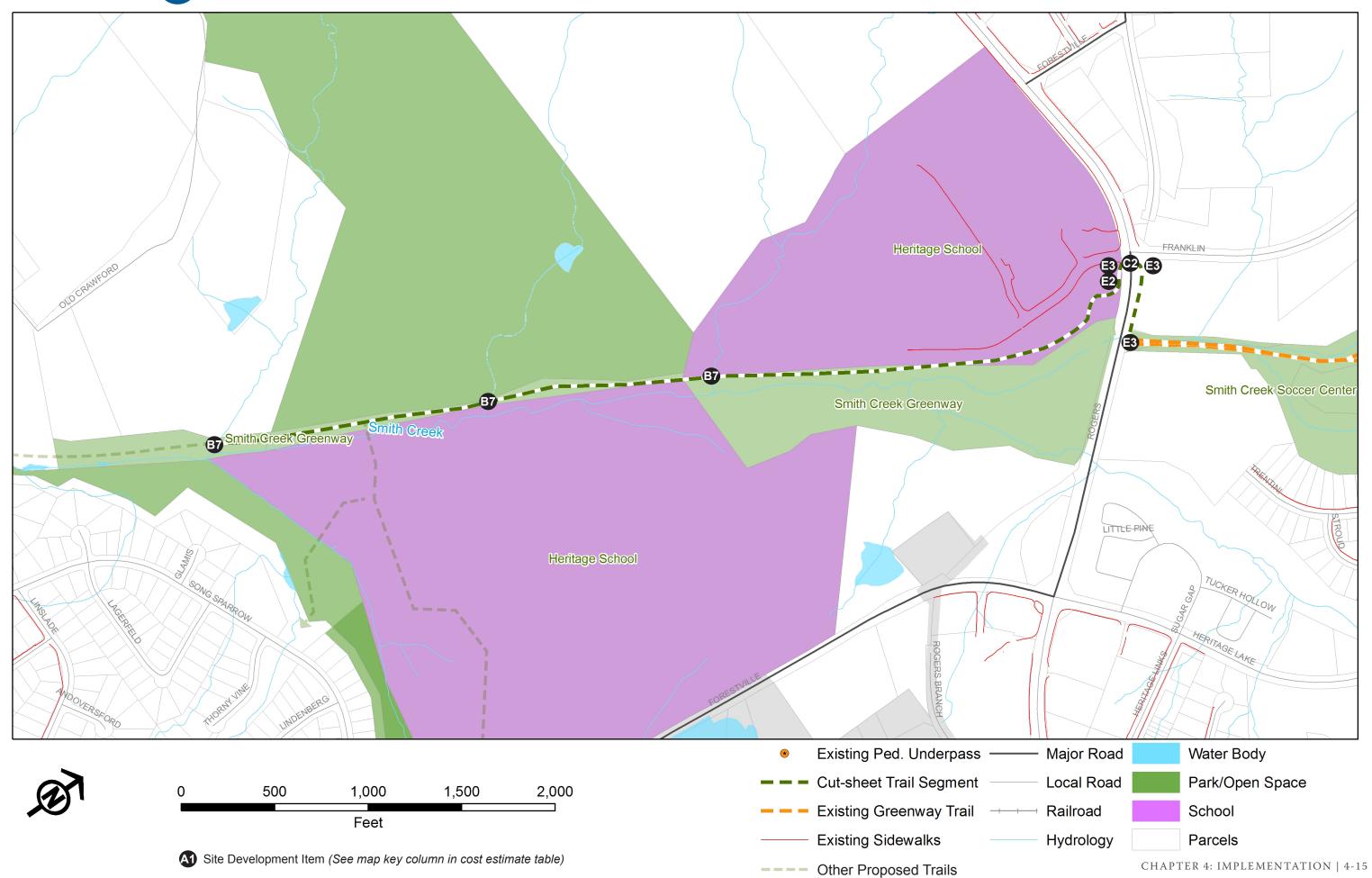
# SMITH CREEK CORRIDOR

## (From (From Rogers Road to Sanford Creek)

## A1	Clearing and grubbing understory (20' wide)  Dumping Fees @ 6% of Demolition total  Site Development  Off-Road Facility (6,335 lf)  Temporary tree protection/silt fence (both sides)  Trail grading (0-5 cu ft/lf)  10' wide multi-use asphalt trail 2' wide gravel shoulder (both sides)  Wooden or recycled synthetic material boardwalk  Small Bike/Ped Bridge  Drainage culvert (36" reinforced concrete pipe)  Seeding or mulching trail edges (5' both sides)  Geotextile fabric  On-Road Facility  Crosswalk: Striping (High Visibility Paint)  Crosswalk: Striping (High Visibility Thermo)(4)	Quantity  Quantity  10,560 5,280 10,560 0 60 52,800 5,280	\$0.25 \$0.25 \$0.25 \$0.25 \$0.25 \$2.00 \$3.30 \$50.00 \$6.60 \$250.00 \$1,350.00 \$44.00 \$0.13 \$1.50	Unit  sf 6% Subtotal  Unit  If	\$17,424.0 \$264,000.0 \$69,696.0 \$0.0 \$0.0
B B1 B2 B3 B4 B5 B6 B7 B8 B9 C C1 C2 C3 C4	Site Development  Off-Road Facility (6,335 lf) Temporary tree protection/silt fence (both sides) Trail grading (0-5 cu ft/lf) 10' wide multi-use asphalt trail 2' wide gravel shoulder (both sides) Wooden or recycled synthetic material boardwalk Small Bike/Ped Bridge Drainage culvert (36" reinforced concrete pipe) Seeding or mulching trail edges (5' both sides) Geotextile fabric  On-Road Facility Crosswalk: Striping (High Visibility Paint)	10,560 5,280 5,280 10,560 0 0 60 52,800 5,280	\$2.00 \$3.30 \$50.00 \$6.60 \$250.00 \$1,350.00 \$44.00 \$0.13	6% Subtotal  Unit  If If If If If If If If Sf	\$0.0 \$0.0 \$1,120.0 \$17,424.0 \$264,000.0 \$69,696.0 \$0.0 \$0.0 \$2,640.0
B B1 B2 B3 B4 B5 B6 B7 B8 B9 C C1 C2 C3 C4	Site Development  Off-Road Facility (6,335 lf) Temporary tree protection/silt fence (both sides) Trail grading (0-5 cu ft/lf) 10' wide multi-use asphalt trail 2' wide gravel shoulder (both sides) Wooden or recycled synthetic material boardwalk Small Bike/Ped Bridge Drainage culvert (36" reinforced concrete pipe) Seeding or mulching trail edges (5' both sides) Geotextile fabric  On-Road Facility Crosswalk: Striping (High Visibility Paint)	10,560 5,280 5,280 10,560 0 0 60 52,800 5,280	\$2.00 \$3.30 \$50.00 \$6.60 \$250.00 \$1,350.00 \$44.00 \$0.13	Unit  If If If If If If If If Sf	\$21,120.0 \$17,424.0 \$264,000.0 \$69,696.0 \$0.0 \$0.0 \$2,640.0
B B1 B2 B3 B4 B5 B6 B7 B8 B9 C C1 C2 C3 C4	Off-Road Facility (6,335 lf)  Temporary tree protection/silt fence (both sides)  Trail grading (0-5 cu ft/lf)  10' wide multi-use asphalt trail  2' wide gravel shoulder (both sides)  Wooden or recycled synthetic material boardwalk  Small Bike/Ped Bridge  Drainage culvert (36" reinforced concrete pipe)  Seeding or mulching trail edges (5' both sides)  Geotextile fabric  On-Road Facility  Crosswalk: Striping (High Visibility Paint)	10,560 5,280 5,280 10,560 0 0 60 52,800 5,280	\$2.00 \$3.30 \$50.00 \$6.60 \$250.00 \$1,350.00 \$44.00 \$0.13	If If If If If If If If If Sf	\$21,120.0 \$17,424.0 \$264,000.0 \$69,696.0 \$0.0 \$0.0
B B1 B2 B3 B4 B5 B6 B7 B8 B9 C C1 C2 C3 C4	Off-Road Facility (6,335 lf)  Temporary tree protection/silt fence (both sides)  Trail grading (0-5 cu ft/lf)  10' wide multi-use asphalt trail  2' wide gravel shoulder (both sides)  Wooden or recycled synthetic material boardwalk  Small Bike/Ped Bridge  Drainage culvert (36" reinforced concrete pipe)  Seeding or mulching trail edges (5' both sides)  Geotextile fabric  On-Road Facility  Crosswalk: Striping (High Visibility Paint)	10,560 5,280 5,280 10,560 0 0 60 52,800 5,280	\$2.00 \$3.30 \$50.00 \$6.60 \$250.00 \$1,350.00 \$44.00 \$0.13	If If If If If If If If If Sf	\$21,120.0 \$17,424.0 \$264,000.0 \$69,696.0 \$0.0 \$0.0
B1 B2 B3 B4 B5 B6 B7 B8 B9 CC C1 C2 C3 C4	Temporary tree protection/silt fence (both sides) Trail grading (0-5 cu ft/lf) 10' wide multi-use asphalt trail 2' wide gravel shoulder (both sides) Wooden or recycled synthetic material boardwalk Small Bike/Ped Bridge Drainage culvert (36" reinforced concrete pipe) Seeding or mulching trail edges (5' both sides) Geotextile fabric  On-Road Facility Crosswalk: Striping (High Visibility Paint)	5,280 5,280 10,560 0 0 60 52,800 5,280	\$3.30 \$50.00 \$6.60 \$250.00 \$1,350.00 \$44.00 \$0.13	If If If If If If If Sf	\$21,120.0 \$17,424.0 \$264,000.0 \$69,696.0 \$0.0 \$0.0
B2 B3 B4 B5 B6 B7 B8 B9 C C1 C2 C3 C4	Trail grading (0-5 cu ft/lf)  10' wide multi-use asphalt trail  2' wide gravel shoulder (both sides)  Wooden or recycled synthetic material boardwalk  Small Bike/Ped Bridge  Drainage culvert (36" reinforced concrete pipe)  Seeding or mulching trail edges (5' both sides)  Geotextile fabric  On-Road Facility  Crosswalk: Striping (High Visibility Paint)	5,280 5,280 10,560 0 0 60 52,800 5,280	\$3.30 \$50.00 \$6.60 \$250.00 \$1,350.00 \$44.00 \$0.13	If If If If If If If Sf	\$17,424.0 \$264,000.0 \$69,696.0 \$0.0 \$0.0
B3 B4 B5 B6 B7 B8 B9  C1 C2 C3 C4	10' wide multi-use asphalt trail 2' wide gravel shoulder (both sides) Wooden or recycled synthetic material boardwalk Small Bike/Ped Bridge Drainage culvert (36" reinforced concrete pipe) Seeding or mulching trail edges (5' both sides) Geotextile fabric  On-Road Facility Crosswalk: Striping (High Visibility Paint)	5,280 10,560 0 0 60 52,800 5,280	\$50.00 \$6.60 \$250.00 \$1,350.00 \$44.00 \$0.13	If If If If If If Sf	\$264,000.0 \$69,696.0 \$0.0 \$0.0 \$2,640.0
B4 B5 B6 B7 B8 B9 C C1 C2 C3 C4	2' wide gravel shoulder (both sides) Wooden or recycled synthetic material boardwalk Small Bike/Ped Bridge Drainage culvert (36" reinforced concrete pipe) Seeding or mulching trail edges (5' both sides) Geotextile fabric  On-Road Facility Crosswalk: Striping (High Visibility Paint)	10,560 0 0 60 52,800 5,280	\$6.60 \$250.00 \$1,350.00 \$44.00 \$0.13	If If If If Sf	\$69,696.0 \$0.0 \$0.0 \$2,640.0
B5 B6 B7 B8 B9 C C1 C2 C3 C4	Wooden or recycled synthetic material boardwalk Small Bike/Ped Bridge Drainage culvert (36" reinforced concrete pipe) Seeding or mulching trail edges (5' both sides) Geotextile fabric  On-Road Facility Crosswalk: Striping (High Visibility Paint)	0 0 60 52,800 5,280	\$250.00 \$1,350.00 \$44.00 \$0.13	If If If sf	\$0.0 \$0.0 \$2,640.0
B6 B7 B8 B9 C C1 C2 C3 C4	Small Bike/Ped Bridge Drainage culvert (36" reinforced concrete pipe) Seeding or mulching trail edges (5' both sides) Geotextile fabric  On-Road Facility Crosswalk: Striping (High Visibility Paint)	0 60 52,800 5,280	\$1,350.00 \$44.00 \$0.13	If If sf	\$0.0 \$2,640.0
B7 B8 B9 C C1 C2 C3 C4	Drainage culvert (36" reinforced concrete pipe) Seeding or mulching trail edges (5' both sides) Geotextile fabric  On-Road Facility Crosswalk: Striping (High Visibility Paint)	52,800 5,280	\$44.00 \$0.13	If sf	\$2,640.0
B8 B9 C C1 C2 C3 C4 D	Seeding or mulching trail edges (5' both sides) Geotextile fabric On-Road Facility Crosswalk: Striping (High Visibility Paint)	52,800 5,280	\$0.13	sf	
B9 C C1 C2 C3 C4 D	Geotextile fabric On-Road Facility Crosswalk: Striping (High Visibility Paint)	5,280			\$6,864.0
C C1 C2 C3 C4	Crosswalk: Striping (High Visibility Paint)		7-1	II I	\$7,920.0
C1 C2 C3 C4	Crosswalk: Striping (High Visibility Paint)				Ψ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
C2 C3 C4			+1.50	16	
C3 C4	(Crosswalk: Striping (High Visibility Thermo)(4)	0	\$1.60	lf If	\$0.0
C4 <b>D</b>		340	\$4.80	If	\$1,632.0
D	Ped-activated overhead warning lights	0	Unknown Unknown	ea	\$0.0
	Median pedestrian refuge island	0	UNKNOWN	ea	\$0.0
D1	Utilities				
	Solar powered light	0	\$5,900.00	ea	\$0.0
D2	Solar powered light pole	0	\$1,420.00	ea	\$0.0
D3	Emergency phones	0	\$2,730.00	ea	\$0.0
E	Signage				
E1	Mile Markers	2	\$220.00	ea	\$440.0
E2	Trail and street regulatory/warning signs	1	\$220.00	ea	\$220.0
E3	Directional signs	3	\$220.00	ea	\$660.0
E4	Educational signs	1	\$330.00	ea	\$330.0
F	Site Amenities				
F1	Benches (2 per mile recommended)	2	\$900.00	ea	\$1,800.0
F2	Bicycle rack (at trailheads)	0	\$225.00	ea	\$0.0
F3	Drinking fountains, with pet fountain (1/mile)	1	\$2,000.00	ea	\$2,000.0
F4	Picnic tables/ tables (at trailheads)	0	\$550.00	ea	\$0.0
F5	Trash receptacles (32-gallon, steel)(at trailheads)	0	\$300.00	ea	\$0.0
F6	Bollards (2 per trail/road intersection)	4	\$600.00	ea	\$2,400.0
F7	Parking (10-car lot)(at trailheads)	0	\$22,000.00	ea	\$0.0
F8	Parking (20-car lot)(at trailheads)	0	\$55,000.00	ea	\$0.0
				Subtotal	\$399,146.0
G	Design	Quantity	Cost	Unit	Subtota
G1	Wetlands Deliniation	5,280	\$1.00	If	\$5,280.0
G2	Geotechnical Testing	5,280	\$3.00	lf	\$15,840.0
G3	Construction Documents @ 12 % of Dev. Cost	,		12%	\$47,897.5
				Subtotal	\$69,017.5
				Subtotal	\$09,017.5
_	Subtotals				
A B	Demolition Off-Road Facility				\$0.0 \$389,664.0
C	On-Road Facility				\$369,004.0 \$1,632.0
D	Utilities				\$0.0
Е	Signage				\$1,650.0
F	Site Amenities				\$6,200.0
G	Design				\$69,017.5
	SUBTOTAL				\$468,163.5
	Contingency (15% of total)		ı	15%	\$70,224.5

Note: Does not include the following: land acquisition, potential rock and unsuitable soils excavation, permitting fees, mobilization, and taxes.

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# COST ESTIMATE FOR CUT SHEET 5

# SMITH CREEK CORRIDOR

## (From Sanford Creek to Ligan Mill)

Α	Demolition	Quantity	Cost	Unit	Subtota
A1	Clearing and grubbing understory (20' wide)	0	\$0.25	sf	\$0.0
A2	Dumping Fees @ 6% of Demolition total			6%	\$0.0
				Subtotal	\$0.0
	Site Development	Quantity	Cost	Unit	Subtota
В	Off-Road Facility (6,335 lf)				
B1	Temporary tree protection/silt fence (both sides)	6,640	\$2.00	lf	\$13,280.0
B2	Trail grading (0-5 cu ft/lf)	3,320	\$3.30	lf	\$10,956.0
В3	10' wide multi-use asphalt trail	3,320	\$50.00	lf	\$166,000.0
В4	2' wide gravel shoulder (both sides)	6,640	\$6.60	lf	\$43,824.0
В5	Wooden or recycled synthetic material boardwalk	1,500	\$250.00	lf	\$375,000.0
В6	Small Bike/Ped Bridge (possibly 2 needed)	0	\$1,350.00	lf	\$0.0
В7	Drainage culvert (36" reinforced concrete pipe)	0	\$44.00	lf	\$0.0
В8	Seeding or mulching trail edges (5' both sides)	33,200	\$0.13	sf	\$4,316.0
В9	Geotextile fabric	3,320	\$1.50	lf	\$4,980.0

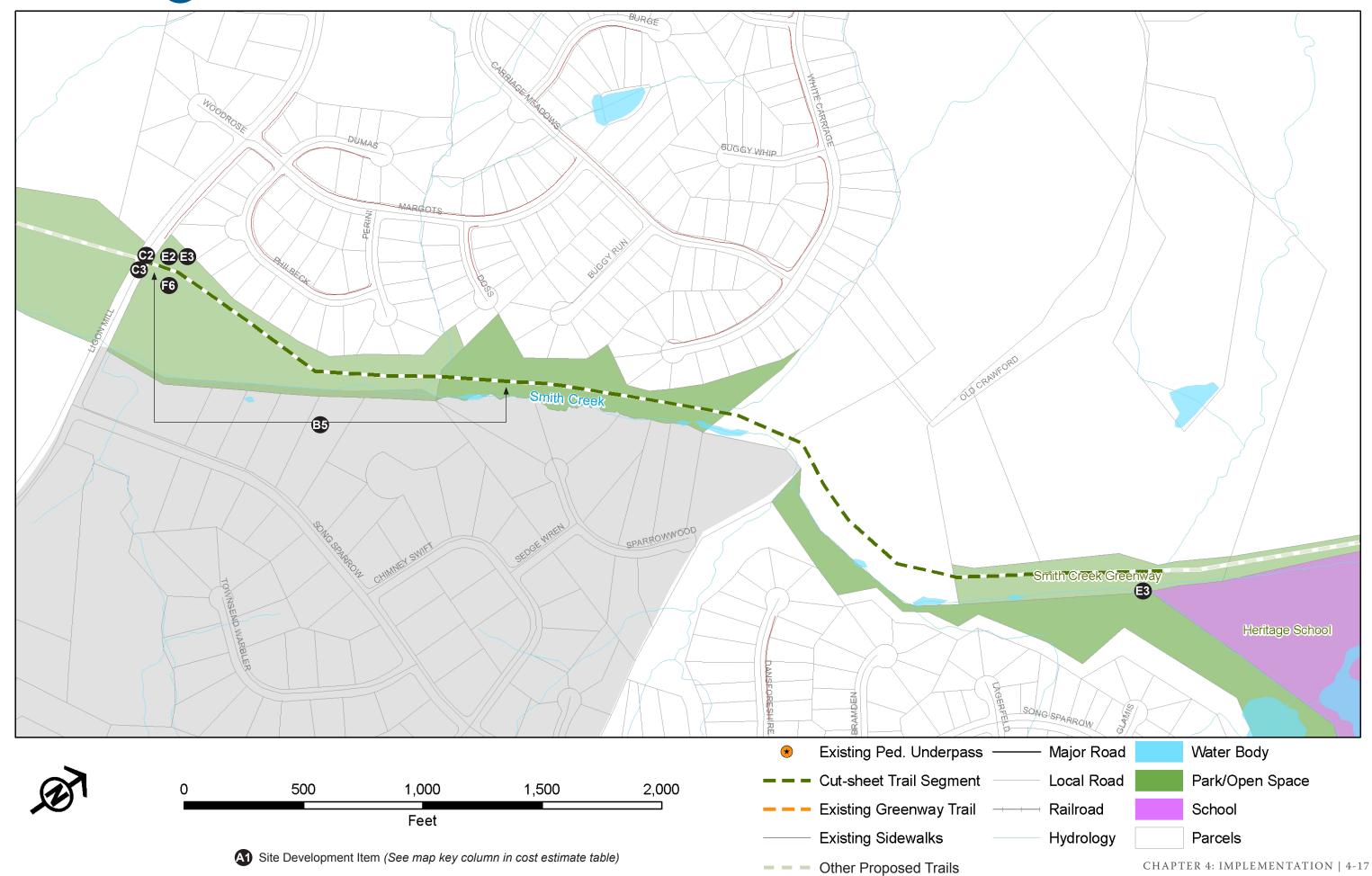
В	Off-Road Facility (6,335 lf)				
<u>В</u> В1	Temporary tree protection/silt fence (both sides)	6,640	\$2.00	lf	\$13,280.00
B2	Trail grading (0-5 cu ft/lf)	3,320		If	\$10,956.00
B3	10' wide multi-use asphalt trail	3,320		If	\$166,000.00
B4	2' wide gravel shoulder (both sides)	6,640		If	\$43,824.00
B5	Wooden or recycled synthetic material boardwalk	1,500		If	\$375,000.00
B6	Small Bike/Ped Bridge (possibly 2 needed)	0	\$1,350.00	If	\$0.00
B7	Drainage culvert (36" reinforced concrete pipe)	0	\$44.00	If	\$0.00
B8	Seeding or mulching trail edges (5' both sides)	33,200	\$0.13	sf	\$4,316.00
B9	Geotextile fabric	3,320	\$1.50	If If	\$4,980.00
		3,320	Ψ1.50		ψ 1/300100
С	On-Road Facility				
C1	Crosswalk: Striping (High Visibility Paint)	0	\$1.60	lf	\$0.00
C2	Crosswalk: Striping (High Visibility Thermo)	28	\$4.80	lf	\$134.40
C3	Ped-activated overhead warning lights	1	Unknown	ea	\$0.00
C4	Median pedestrian refuge island	0	Unknown	ea	\$0.00
D	Utilities				
D1	Solar powered light	0	\$5,900.00	ea	\$0.00
D2	Solar powered light pole	0	,	ea	\$0.00
D3	Emergency phones	0	\$2,730.00	ea	\$0.00
E	Signage				
E1	Mile Markers	1	\$220.00	ea	\$220.00
E2	Trail and street regulatory/warning signs	1	\$220.00	ea	\$220.00
E3	Directional signs	2	\$220.00	ea	\$440.00
E4	Educational signs	0	\$330.00	ea	\$0.00
	Eddeddonar Signs		\$350.00	Cu	Ψ0.00
F	Site Amenities				
F1	Benches (2 per mile recommended)	2	\$900.00	ea	\$1,800.00
F2	Bicycle rack (at trailheads)	0	\$225.00	ea	\$0.00
F3	Drinking fountains, with pet fountain (1/mile)	1	\$2,000.00	ea	\$2,000.00
F4	Picnic tables/ tables (at trailheads)	0	\$550.00	ea	\$0.00
F5	Trash receptacles (32-gallon, steel)(at trailheads)	0	\$300.00	ea	\$0.00
F6	Bollards (2 per trail/road intersection)	2	\$600.00	ea	\$1,200.00
F7	Parking (10-car lot)(at trailheads)	0	\$22,000.00	ea	\$0.00
F8	Parking (20-car lot)(at trailheads)	0	\$55,000.00	ea	\$0.00
				Subtotal	\$624,370.40
G	Design	Quantity	Cost	Unit	Subtota
G1	Wetlands Deliniation	3,320		If	\$3,320.00
G2	Geotechnical Testing	3,320	\$3.00	If	\$9,960.00
G3	Construction Documents @ 12 % of Dev. Cost	3,525	45.00	12%	\$74,924.45
	Subtatala			Subtotal	\$88,204.45
_	Subtotals				40.00
<u>A</u>	Demolition Off Bond English				\$0.00
В	Off-Road Facility				\$618,356.00
<u>C</u>	On-Road Facility				\$134.40
D	Utilities				\$0.00
<u>E</u>	Signage				\$880.00
F	Site Amenities				\$5,000.00
G	Design				\$88,204.45
	SUBTOTAL				\$712,574.85
	Contingency (15% of total)			15%	\$106.886.23

Note: Does not include the following: land acquisition, potential rock and unsuitable soils excavation, permitting fees, mobilization, and taxes.

\$819,461.08

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TOTAL



# COST ESTIMATE FOR CUT SHEET

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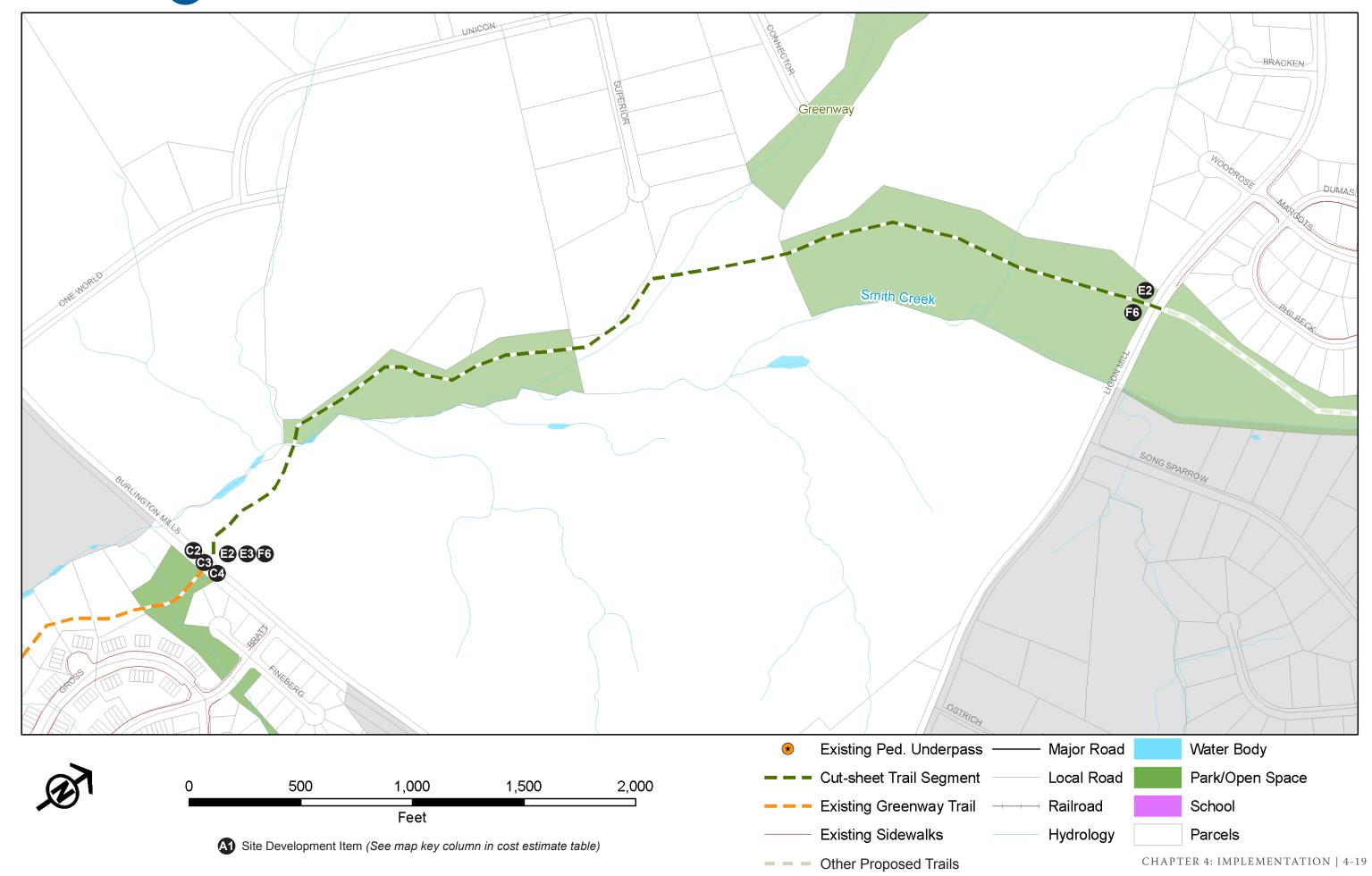
# SMITH CREEK CORRIDOR

# (From From Ligon Mill to Burlington Mill)

Dumping Fees @ 6% of Demolition total   Subtotal   Su			0	\$0.25	sf	\$0.0
Site Development	A2	Dumping Fees @ 6% of Demolition total				Ψ0.
Site Development		painping i ees @ 0 /0 or Demonition total				\$0.0
B					Subtotal	\$0.0
1		Site Development	Quantity	Cost	Unit	Subtot
1	R	Off-Road Facility (6 335 lf)				
Trail grading (0-5 cu ft/lf)			a ann	\$2.00	If	\$19.800
10 wide multi-use asphalt trail						
2   Vivide gravels shoulder (both sides)   9,900   \$6.60   If   \$65,344						
Mooden or recycled synthetic material boardwalk   0   \$1,350.00   If   \$1,550.00   If   \$						
Small Bike/Ped Bridge   0   \$1,350.00   If   \$1   \$1   \$2   \$2   \$2   \$2   \$3   \$3   \$3   \$3						\$0.
Drainage culvert (36" reinforced concrete pipe)   0   \$44.00   ff   \$8	В6	Small Bike/Ped Bridge	0		lf	\$0.
Seeding or mulching trail edges (5" both sides)   49,500   \$0.13   sf   \$5,432	B7	Drainage culvert (36" reinforced concrete pipe)	0	\$44.00	lf	\$0.
C         On-Road Facility         Strain (High Visibility Paint)         0         \$1.60         If         \$4.60         If         \$5.60           C2         Crosswalk: Striping (High Visibility Thermo)         24         \$4.80         If         \$11.11           C3         Ped-activated overhead warning lights         1         Unknown         a         \$1.60           C4         Median pedestrian refuge island         1         Unknown         ea         \$5.90           D         Utilities         0         \$5,900.00         ea         \$5.90           D1         Solar powered light         0         \$5,900.00         ea         \$4.20           D2         Solar powered light pole         0         \$1,420.00         ea         \$4.60           D2         Solar powered light pole         0         \$2,730.00         ea         \$4.60           E         Signage         1         \$220.00         ea         \$2.22           E1         Mile Markers         1         \$220.00         ea         \$2.22           E2         Trail and street regulatory/warning signs         2         \$220.00         ea         \$2.22           E3         Directional signs         1         \$220.00<	B8			\$0.13	sf	\$6,435.
Crosswalk: Striping (High Visibility Paint)   0   \$1.60   If   \$1.15	В9	Geotextile fabric	4,950	\$1.50	lf	\$7,425.
Crosswalk: Striping (High Visibility Paint)   0   \$1.60   If   \$1.15		On-Poad Facility				
Crosswalk: Striping (High Visibility Thermo)			0	\$1.60	lf	\$0.
Ped-activated overhead warning lights						\$115.
Median pedestrian refuge island						\$0.
D   Utilities						\$0.
Solar powered light   Solar powered light pole   Si,420.00   ea   \$\$1,420.00   ea   \$\$3,500   ea   \$\$3,500   ea   \$\$3,500   ea   \$\$4,500   ea   \$\$4,500						·
Solar powered light pole   0   \$1,420.00   ea   \$4						
Estignage				\$5,900.00		\$0.
E Signage E1 Mile Markers E2 Trail and street regulatory/warning signs E3 Directional signs E4 Educational signs E5 Educational signs E6 Educational signs E7 Site Amenities E8 Benches (2 per mile recommended) E8 Educational signs E9 Educational signs E1 Benches (2 per mile recommended) E9 Educational signs E1 Benches (2 per mile recommended) E9 Educational signs E1 Benches (2 per mile recommended) E9 Educational signs E1 Benches (2 per mile recommended) E9 Educational signs E1 Benches (2 per mile recommended) E1 Educational signs E1 Benches (2 per mile recommended) E1 Educational signs E1 Benches (2 per mile recommended) E1 Educational signs E1 Benches (2 per mile recommended) E1 Educational signs E2 Educational signs E3 Educational signs E3 Educational signs E4 Educational signs E5 Irans receptacles E5 Educational signs E6 Educational signs E7 Educational s						\$0.
Mile Markers	D3	Efficiency priories	0	\$2,730.00	ea	\$0.
Trail and street regulatory/warning signs   2   \$220.00   ea   \$444     3   Directional signs   1   \$220.00   ea   \$221     4   Educational signs   0   \$330.00   ea   \$52     5   Educational signs   0   \$330.00   ea   \$52     6   Educational signs   0   \$330.00   ea   \$52     7   Site Amenities	E					
E3   Directional signs   1   \$22.0.00   ea   \$226     E4   Educational signs   0   \$330.00   ea   \$360     E5   E6   E6   E6   E6   E7   E6     E7   Site Amenities	E1				ea	\$220.
E4	E2				ea	\$440.
F   Site Amenities						\$220.
F1	E4	Educational signs	0	\$330.00	ea	\$0.
F2	F	Site Amenities				
F3	F1				ea	\$1,800.
F4	F2				ea	\$0.
Trash receptacles (32-gallon, steel)(at trailheads)						\$2,000.
Bollards (2 per trail/road intersection)						\$0.
F7   Parking (10-car lot)(at trailheads)   0   \$22,000.00   ea   \$15     F8   Parking (20-car lot)(at trailheads)   0   \$55,000.00   ea   \$15						\$0.
Parking (20-car lot)(at trailheads)   0   \$55,000.00   ea   \$60,000						
Subtotal						\$0. \$0.
G         Design         Quantity         Cost         Unit         Subtote           G1         Wetlands Deliniation         4,950         \$1.00         If         \$4,950           G2         Geotechnical Testing         4,950         \$3.00         If         \$14,850           G3         Construction Documents @ 12 % of Dev. Cost         12%         \$44,400           Subtotals           A         Demolition         \$0           B         Off-Road Facility         \$362,835           C         On-Road Facility         \$115           D         Utilities         \$0           E         Signage         \$880           F         Site Amenities         \$64,203           G         Design         \$64,203           SUBTOTAL         \$434,233           Contingency (15% of total)         15%         \$65,135		ranking (20 car loc)(at trainicaas)		ψ33/000100		
G1         Wetlands Deliniation         4,950         \$1.00         If         \$4,950           G2         Geotechnical Testing         4,950         \$3.00         If         \$14,850           G3         Construction Documents @ 12 % of Dev. Cost         12%         \$44,400           Subtotals         Subtotal         \$64,203           A         Demolition         \$362,835           C         On-Road Facility         \$115           D         Utilities         \$0           E         Signage         \$880           F         Site Amenities         \$64,203           G         Design         \$64,203           SUBTOTAL         \$434,233           Contingency (15% of total)         15%         \$65,135					Subtotal	\$370,030.
G2         Geotechnical Testing         4,950         \$3.00         If         \$14,850           G3         Construction Documents @ 12 % of Dev. Cost         12%         \$44,400           Subtotal           Subtotals         \$0           A         Demolition         \$0           B         Off-Road Facility         \$362,835           C         On-Road Facility         \$115           D         Utilities         \$0           E         Signage         \$880           F         Site Amenities         \$64,203           G         Design         \$64,203           SUBTOTAL         \$434,233           Contingency (15% of total)         \$65,135		• •				Subto
G3   Construction Documents @ 12 % of Dev. Cost   12%   \$44,403						\$4,950.
Subtotals         \$64,203           A Demolition         \$0           B Off-Road Facility         \$362,835           C On-Road Facility         \$115           D Utilities         \$0           E Signage         \$880           F Site Amenities         \$6,200           G Design         \$64,203           SUBTOTAL         \$434,233           Contingency (15% of total)         \$65,135			4,950	\$3.00		
Subtotals       \$0         A Demolition       \$0         B Off-Road Facility       \$362,835         C On-Road Facility       \$115         D Utilities       \$0         E Signage       \$880         F Site Amenities       \$6,200         G Design       \$64,203         SUBTOTAL       \$434,233         Contingency (15% of total)       \$55,135	G3	Construction Documents @ 12 % of Dev. Cost			12%	\$44,403.
A       Demolition       \$0         B       Off-Road Facility       \$362,835         C       On-Road Facility       \$115         D       Utilities       \$0         E       Signage       \$880         F       Site Amenities       \$6,200         G       Design       \$64,203         SUBTOTAL       \$434,233         Contingency (15% of total)       \$55,135					Subtotal	\$64,203.0
B       Off-Road Facility       \$362,835         C       On-Road Facility       \$115         D       Utilities       \$0         E       Signage       \$880         F       Site Amenities       \$6,200         G       Design       \$64,203         SUBTOTAL       \$434,233         Contingency (15% of total)       \$65,135						
C       On-Road Facility       \$115         D       Utilities       \$0         E       Signage       \$880         F       Site Amenities       \$6,200         G       Design       \$64,203         SUBTOTAL       \$434,233         Contingency (15% of total)       \$55,135	Α					\$0.0
D       Utilities       \$0         E       Signage       \$880         F       Site Amenities       \$6,200         G       Design       \$64,203         SUBTOTAL       \$434,233         Contingency (15% of total)       15%       \$65,135		,				\$362,835.0
E       Signage       \$880         F       Site Amenities       \$6,200         G       Design       \$64,203         SUBTOTAL       \$434,233         Contingency (15% of total)       15%       \$65,135		•				
F       Site Amenities       \$6,200         G       Design       \$64,203         SUBTOTAL       \$434,233         Contingency (15% of total)       15%       \$65,135						\$0.0
G       Design       \$64,203         SUBTOTAL       \$434,233         Contingency (15% of total)       15%       \$65,135						\$880.
SUBTOTAL         \$434,233           Contingency (15% of total)         15%         \$65,135						\$6,200.
Contingency (15% of total) 15% \$65,135	G					\$64,203.
						\$434,233.
TOTAL \$499,368		1			4 = ~ .	

Note: Does not include the following: land acquisition, potential rock and unsuitable soils excavation, permitting fees, mobilization, and taxes.

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## COST ESTIMATE FOR CUT SHEET

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# RICHLAND CREEK CORRIDOR

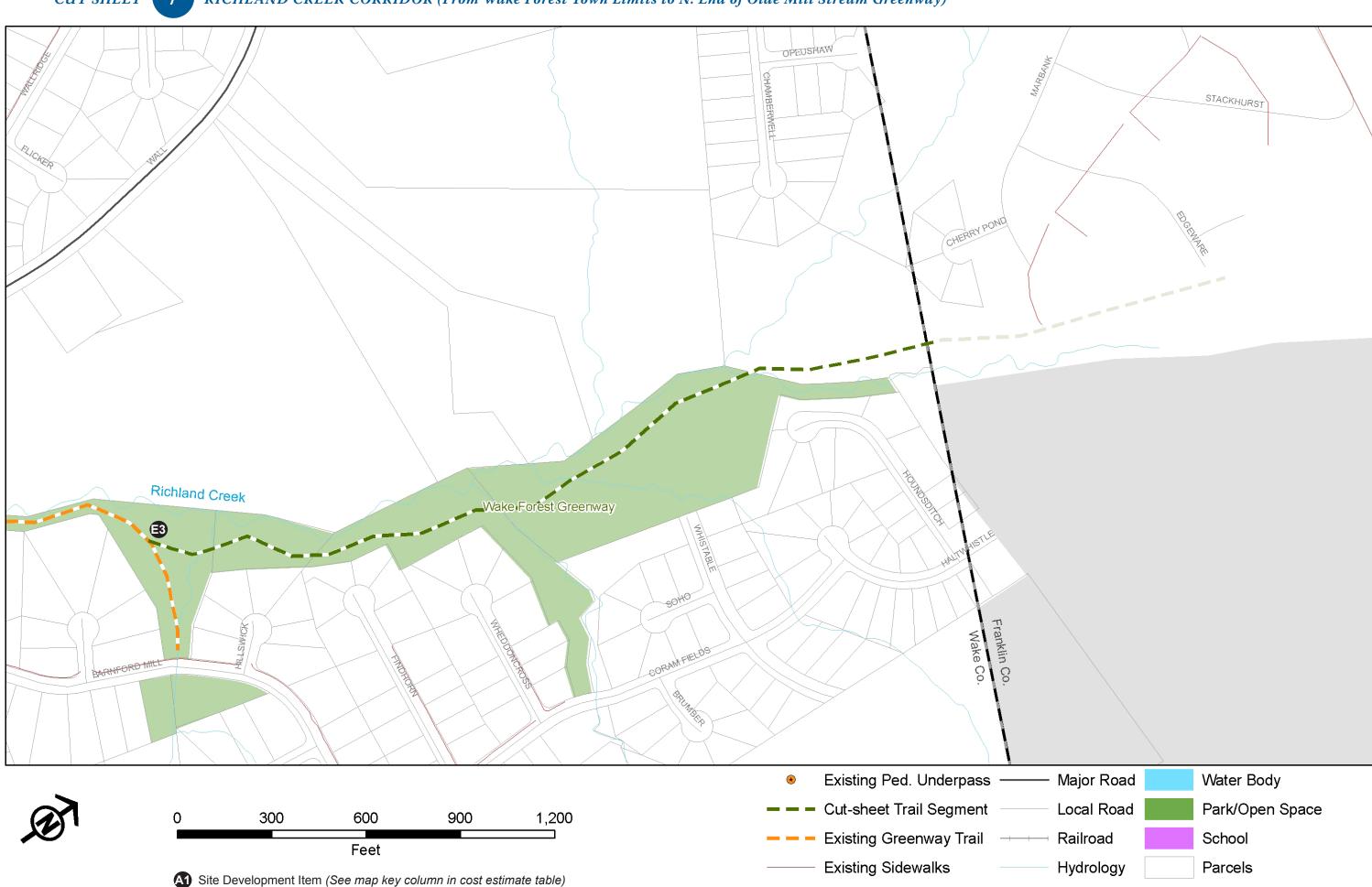
#### (From Wake Forest Town Limits to N. End of Olde Mill Stream Greenway)

	Demolition	Quantity	Cost	Unit	Subtota
A1	Clearing and grubbing understory (20' wide)	0	\$0.25	sf	\$0.0
A2	Dumping Fees @ 6% of Demolition total			6%	\$0.0
				Subtotal	\$0.0
	Site Development	Quantity	Cost	Unit	Subtota
В	Off-Road Facility (6,335 lf)				
B1	Temporary tree protection/silt fence (both sides)	9,200	\$2.00	lf	\$18,400.0
B2	Trail grading (0-5 cu ft/lf)	4,600	\$3.30	If	\$15,180.0
B3	10' wide multi-use asphalt trail	4,600	\$50.00	lf	\$230,000.0
B4	2' wide gravel shoulder (both sides)	9,200	\$6.60	lf	\$60,720.0
B5	Wooden or recycled synthetic material boardwalk	0	\$250.00	lf	\$0.0
В6	Small Bike/Ped Bridge	0	\$1,350.00	lf	\$0.0
В7	Drainage culvert (36" reinforced concrete pipe)	0	\$44.00	lf	\$0.0
B8	Seeding or mulching trail edges (5' both sides)	46,000	\$0.13	sf	\$5,980.0
В9	Geotextile fabric	4,600	\$1.50	lf	\$6,900.0
С	On-Road Facility				
C1	Crosswalk: Striping (High Visibility Paint)	0	\$1.60	If	\$0.0
C2	Crosswalk: Striping (High Visibility Thermo)	0	\$4.80	If	\$0.0
C3	Ped-activated overhead warning lights	0	Unknown	ea	\$0.0
C4	Median pedestrian refuge island	0	Unknown	ea	\$0.
	Hallia!				
<b>D</b>	Utilities Solar powered light	0	\$5,900.00		\$0.0
D2	Solar powered light pole	0	\$1,420.00	ea ea	\$0.0
D3	Emergency phones	0	\$2,730.00	ea	\$0.
					·
<u>E</u>	Signage Mile Markers	1	\$220.00	0.2	#220 <i>(</i>
E1 E2	Trail and street regulatory/warning signs	0	\$220.00	ea ea	\$220.0 \$0.0
E3	Directional signs	1	\$220.00	ea	\$220.0
E4	Educational signs	0	\$330.00	ea	\$0.0
_	Cite Amonibios				
<b>F</b>	Site Amenities  Benches (2 per mile recommended)	2	\$900.00	ea	\$1,800.
F2	Bicycle rack (at trailheads)	0	\$225.00	ea	\$1,800.
F3	Drinking fountains, with pet fountain (1/mile)	1	\$2,000.00	ea	\$2,000.
F4	Picnic tables/ tables (at trailheads)	0	\$550.00	ea	\$0.
F5	Trash receptacles (32-gallon, steel)(at trailheads)	0	\$300.00	ea	\$0.
F6	Bollards (2 per trail/road intersection)	0	\$600.00	ea	\$0.
F7	Parking (10-car lot)(at trailheads)	0	\$22,000.00	ea	\$0.
F8	Parking (20-car lot)(at trailheads)	0	\$55,000.00	ea	\$0.
				Subtotal	\$341,420.0
G	Design	Quantity	Cost	Unit	Subtot
G1	Wetlands Deliniation	4,600	\$1.00	If	\$4,600.
	Geotechnical Testing	4,600	\$3.00	lf	\$13,800.
G2				12%	\$40,970.
G2 G3	Construction Documents @ 12 % of Dev. Cost			1270	1 -7-
	Construction Documents @ 12 % of Dev. Cost			Subtotal	
	Construction Documents @ 12 % of Dev. Cost  Subtotals  Demolition				\$59,370.4
G3	Subtotals				\$59,370.4 \$0.0 \$337,180.0
G3 <b>A</b>	Subtotals Demolition				\$59,370.4 \$0.0 \$337,180.0
A B C D	Subtotals  Demolition  Off-Road Facility  On-Road Facility  Utilities				\$59,370.4 \$0.0 \$337,180.0 \$0.0 \$0.0
A B C D E	Subtotals  Demolition  Off-Road Facility  On-Road Facility  Utilities  Signage				\$59,370.4 \$0.0 \$337,180.0 \$0.0 \$440.0
A B C D E F	Subtotals  Demolition  Off-Road Facility  On-Road Facility  Utilities  Signage  Site Amenities				\$59,370.4 \$0.0 \$337,180.0 \$0.0 \$440.0 \$3,800.0
A B C D E	Subtotals  Demolition  Off-Road Facility  On-Road Facility  Utilities  Signage  Site Amenities  Design				\$59,370.4 \$0.0 \$337,180.0 \$0.0 \$440.0 \$3,800.0 \$59,370.4
A B C D E F	Subtotals  Demolition  Off-Road Facility  On-Road Facility  Utilities  Signage  Site Amenities				\$59,370.4 \$0.0 \$337,180.0 \$0.0 \$440.0 \$3,800.0

Note: Does not include the following: land acquisition, potential rock and unsuitable soils excavation, permitting fees, mobilization, and taxes.

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Other Proposed Trails

## COST ESTIMATE FOR CUT SHEET

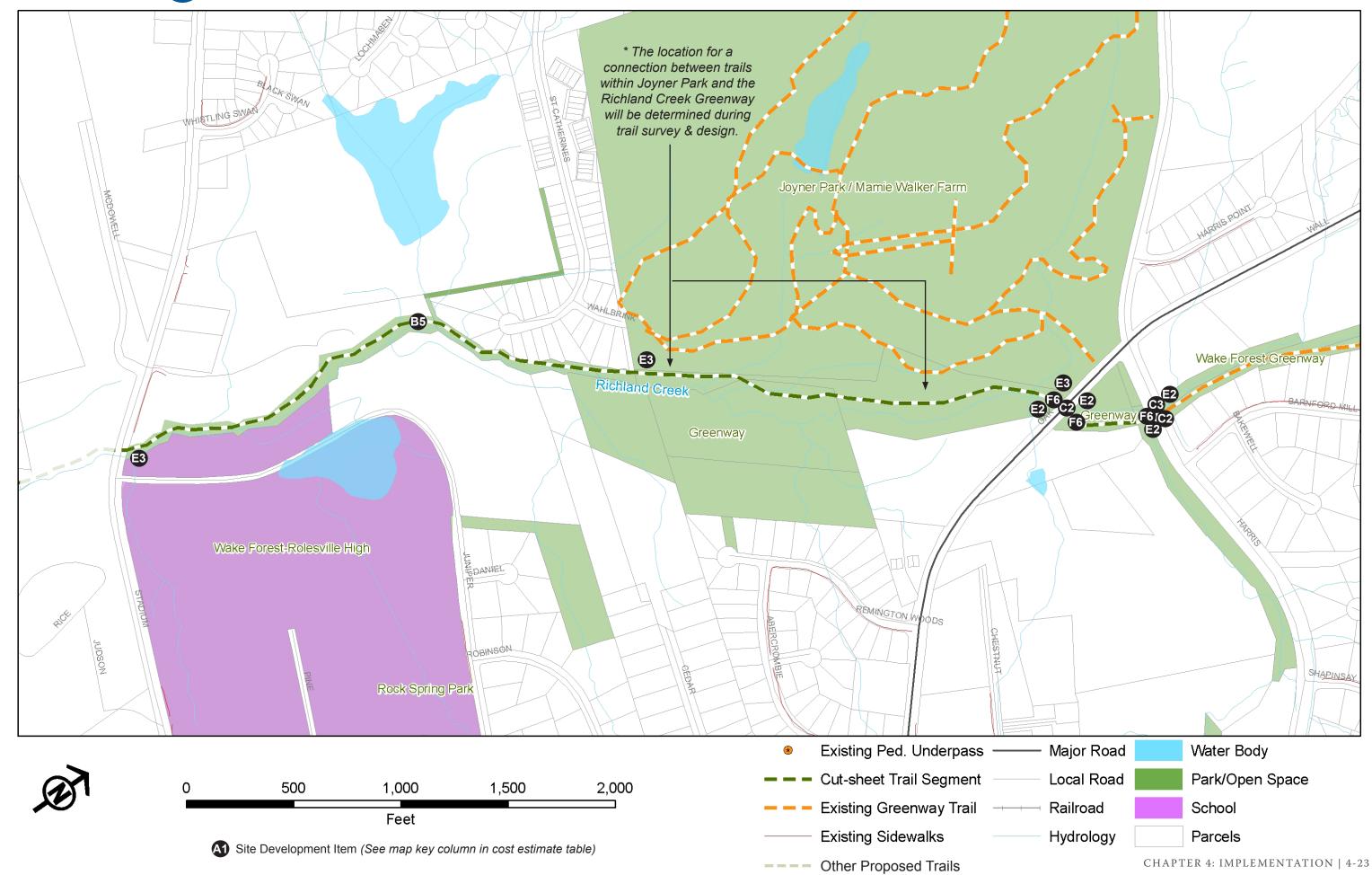


## RICHLAND CREEK CORRIDOR

### (From Harris Road to Stadium Drive)

Α	Demolition	Quantity	Cost	Unit	Subtota
		Quantity	\$0.25		
A1 A2	Clearing and grubbing understory (20' wide)  Dumping Fees @ 6% of Demolition total	0	\$0.25	sf 6%	\$0.0 \$0.0
AZ	Dumping Fees @ 6% of Demontion total			Subtotal	\$0.0 \$0.0
				Sabtotai	φοιο
	Site Development	Quantity	Cost	Unit	Subtota
В	Off-Road Facility (6,335 lf)				
B1	Temporary tree protection/silt fence (both sides)	8,400	\$2.00	If	\$16,800.0
B2	Trail grading (0-5 cu ft/lf)	4,200	\$3.30	lf If	\$13,860.0
В3	10' wide multi-use asphalt trail	4,200	\$50.00	lf	\$210,000.0
B4	2' wide gravel shoulder (both sides)	8,400	\$6.60	lf	\$55,440.0
B5	Wooden or recycled synthetic material boardwalk	1,000	\$250.00	lf	\$250,000.0
В6	Small Bike/Ped Bridge	0	\$1,350.00	lf	\$0.0
В7	Drainage culvert (36" reinforced concrete pipe)	0	\$44.00	lf	\$0.0
B8	Seeding or mulching trail edges (5' both sides)	42,000	\$0.13	sf	\$5,460.0
В9	Geotextile fabric	4,200	\$1.50	lf	\$6,300.0
С	On-Road Facility				
C1	Crosswalk: Striping (High Visibility Paint)	0	\$1.60	If	\$0.0
C2	Crosswalk: Striping (High Visibility Thermo) (2)	48	\$4.80	If	\$230.4
C3	Ped-activated overhead warning lights	1	Unknown	ea	\$0.0
C4	Median pedestrian refuge island	0	Unknown	ea	\$0.0
	1102124				
D	Utilities Colon as a second light	0	ΦE 000 00		±0.0
D1	Solar powered light	0	\$5,900.00	ea	\$0.0 \$0.0
D2 D3	Solar powered light pole Emergency phones	0	\$1,420.00 \$2,730.00	ea ea	\$0.0 \$0.0
DJ	Emergency phones		\$2,730.00	cu	φοι
E	Signage		+220.00		+220
E1	Mile Markers	1	\$220.00	ea	\$220.0
E2	Trail and street regulatory/warning signs	2	\$220.00	ea	\$880.0
E3 E4	Directional signs Educational signs	1	\$220.00 \$330.00	ea ea	\$440.0 \$330.0
			'		•
F	Site Amenities	2	±000 00		#1 000 f
F1	Benches (2 per mile recommended)	2 0	\$900.00	ea	\$1,800.0
F2	Bicycle rack (at trailheads)  Drinking fountains, with pet fountain (1/mile)	1	\$225.00 \$2,000.00	ea	\$0.0 \$2,000.0
F3 F4	Picnic tables/ tables (at trailheads)	0	\$550.00	ea ea	\$2,000.0
F5	Trash receptacles (32-gallon, steel)(at trailheads)	0	\$300.00	ea	\$0.0
F6	Bollards (2 per trail/road intersection)	4	\$600.00	ea	\$2,400.0
F7	Parking (10-car lot)(at trailheads)	0	\$22,000.00	ea	\$0.0
F8	Parking (20-car lot)(at trailheads)	0	\$55,000.00	ea	\$0.
				Subtotal	\$566,160.4
_	Pasian	0	Cont		•
<b>G</b>	<b>Design</b>   Wetlands Deliniation	Quantity 4,200	\$1.00	Unit If	<b>Subtot</b> \$4,200.0
G2	Geotechnical Testing	4,200	\$3.00	If	\$12,600.0
G2 G3	Construction Documents @ 12 % of Dev. Cost	4,200	\$3.00	12%	\$67,939.2
				Cultatal	
	1			Subtotal	\$84,739.2
Α	Subtotals  Demolition				\$0.0
<u>в</u>	Off-Road Facility				•
C	On-Road Facility				\$557,860.0 \$230.4
D	Utilities				\$0.0 \$0.0
E	Signage				\$1,870.0
F	Site Amenities				\$6,200.0
G	Design				\$84,739.2
	SUBTOTAL				\$650,899.6
	Contingency (15% of total) TOTAL			15%	\$97,634.9 \$748,534.6

Note: Does not include the following: land acquisition, potential rock and unsuitable soils excavation, permitting fees, mobilization, and taxes. Cost estimate for routing trail underneath Staduim Drive also not included.



## COST ESTIMATE FOR CUT SHEET

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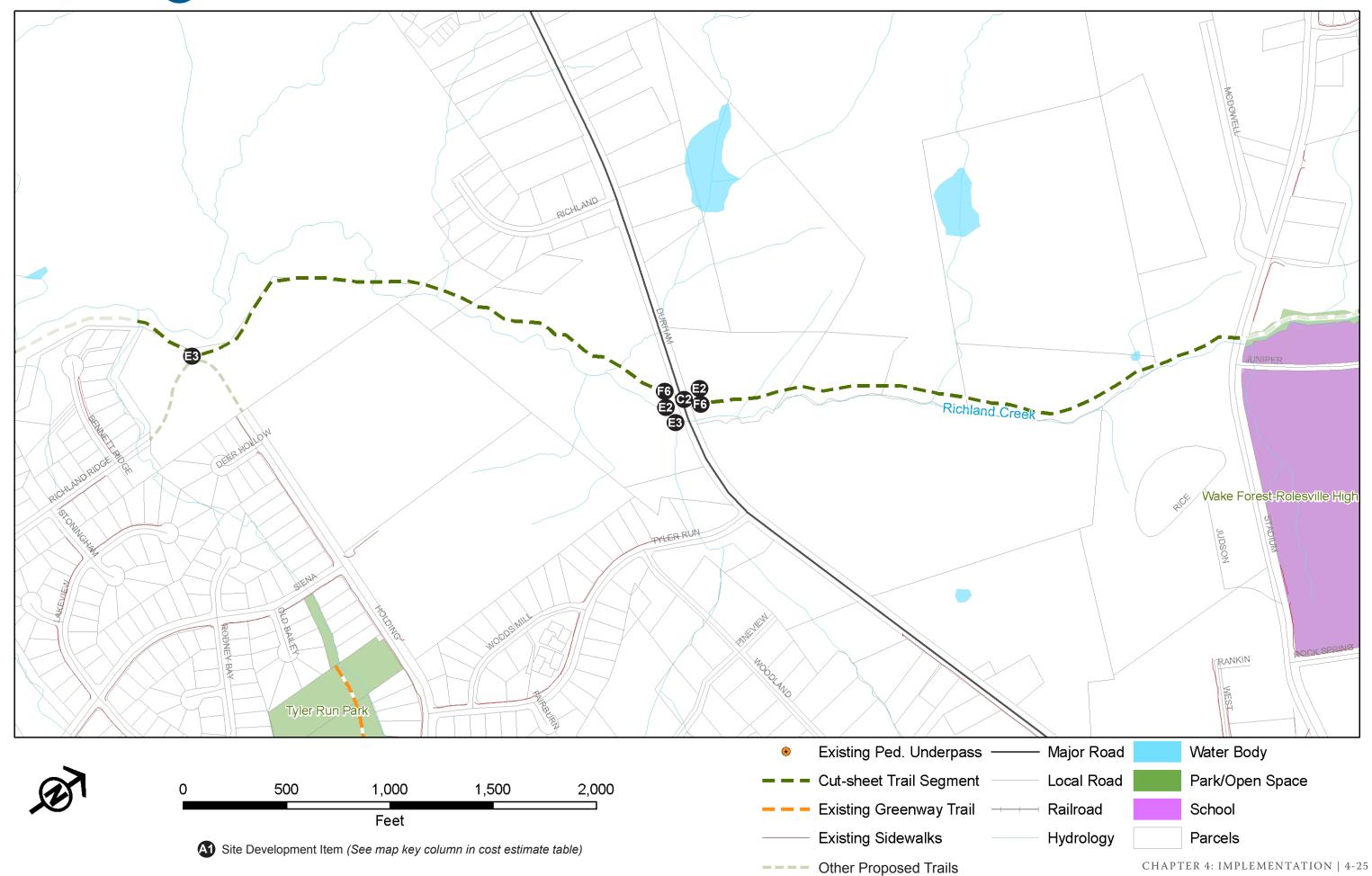
## RICHLAND CREEK CORRIDOR

## (From Stadium Drive to Bennet Park Neighborhood)

Accordance   Acc	p Key <b>A</b>	Demolition	Quantity	Cost	Unit	Subtota
Site Development	۱۱		0	\$0.25	sf	\$0.0
Site Development	A2	Dumping Fees @ 6% of Demolition total				\$0.0
B					Subtotal	\$0.0
Itemporary tree protection/silt fence (both sides)   12,350   \$2,00   if   \$24,700.		Site Development	Quantity	Cost	Unit	Subtota
		Off David Facility (C 225 (6)				
1		• • • • • • • • • • • • • • • • • • • •	12 250	¢2.00	lf.	¢24 700 0
10 wide multi-use asphalt trail   6,175   \$50.00   f \$30,750.						
22   wide gravel shoulder (both sides)   12,350   \$6.60   f   \$81,510.						
BS   Small Bike/Ped Bridge   0   \$1,350,00   f   \$0.						
Small Bike/Ped Bridge   0 \$1,350.00   f \$0.   D Pariange culvert (36' reinforced concrete pipe)   0 \$44.00   f \$0.   D Pariange culvert (36' reinforced concrete pipe)   0 \$44.00   f \$0.   BB Seeding or mulching trail edges (5' both sides)   61,750   \$0.13   sf \$8,027.   BB Geotextile fabric   50.   \$1.50   f \$9,262.   C On-Road Facility	B5					\$0.0
Seeding or mulching trail edges (5' both sides)   6,175   \$0,13   sf   \$8,027.	В6		0			\$0.0
Geotextile fabric   G,175   \$1.50   If   \$9,262.	В7	Drainage culvert (36" reinforced concrete pipe)	0		lf	\$0.0
C         On-Road Facility         Striping (High Visibility Paint)         0         \$1.60         If         \$0.0           C1         Crosswalk: Striping (High Visibility Paint)         0         \$1.50         If         \$0.0           C2         Crosswalk: Striping (High Visibility Paint)         0         \$1.480         If         \$115.           C4         Ped-activated overhead warning lights         0         Unknown         ea         \$0.           C5         Median pedestrian refuge island         0         Unknown         ea         \$0.           D         Utilities         0         \$5,900.00         ea         \$0.           D2         Solar powered light         0         \$5,900.00         ea         \$0.           D2         Solar powered light pole         0         \$1,420.00         ea         \$0.           D2         Solar powered light pole         0         \$2,730.00         ea         \$0.           D2         Signage         1         \$220.00         ea         \$220.00         ea         \$220.00         ea         \$420.00         ea         \$420.00         ea         \$420.00         ea         \$440.00         ea         \$220.00         ea         \$440.00	B8	Seeding or mulching trail edges (5' both sides)	61,750	\$0.13	sf	\$8,027.5
Crosswalk: Striping (High Visibility Paint)	В9	Geotextile fabric	6,175	\$1.50	lf	\$9,262.5
Crosswalk: Striping (High Visibility Paint)	C	On-Road Facility				
Crosswalk: Striping (High Visibility Thermo)   24   \$4.80   If   \$115.			0	\$1.60	If	\$0.0
Ped-activated overhead warning lights						\$115.2
Median pedestrian refuge island						\$0.0
Solar powered light   Solar powered light pole   Si, 420.00   ea   \$0.00						\$0.0
Solar powered light   Solar powered light pole   Si, 420.00   ea   \$0.00		Hailiai				
Solar powered light pole   0 \$1,420.00   ea   \$0.			0	¢E 000 00		¢0.0
Emergency phones   0 \$2,730.00   ea   \$0.						
Mile Markers	D3					\$0.0 \$0.0
Mile Markers						
Trail and street regulatory/warning signs			1	¢220.00	0.2	¢220.0
E3						
E4 Educational signs 0 \$330.00 ea \$0.  F Site Amenities F1 Benches (2 per mile recommended) 2 \$900.00 ea \$1,800. F2 Bicycle rack (at trailheads) 0 \$225.00 ea \$1,800. F3 Drinking fountains, with pet fountain (1/mile) 1 \$2,000.00 ea \$2,000. F4 Picnic tables/ tables (at trailheads) 0 \$550.00 ea \$0. F5 Trash receptacles (32-gallon, steel)(at trailheads) 0 \$300.00 ea \$1,200. F6 Bollards (2 per trail/road intersection) 2 \$600.00 ea \$1,200. F7 Parking (10-car lot)(at trailheads) 0 \$22,000.00 ea \$1,200. F8 Parking (20-car lot)(at trailheads) 0 \$55,000.00 ea \$1,200. F8 Parking (20-car lot)(at trailheads) 0 \$55,000.00 ea \$1,200. F8 Parking (20-car lot)(at trailheads) 0 \$55,000.00 ea \$1,200. F8 Parking (20-car lot)(at trailheads) 0 \$55,000.00 ea \$1,200. F8 Parking (20-car lot)(at trailheads) 0 \$55,000.00 ea \$1,200. F8 Parking (20-car lot)(at trailheads) 0 \$55,000.00 ea \$1,200. F8 Parking (20-car lot)(at trailheads) 0 \$55,000.00 ea \$1,200. F8 Parking (20-car lot)(at trailheads) 0 \$55,000.00 ea \$1,200. F8 Parking (20-car lot)(at trailheads) 0 \$55,000.00 ea \$1,200. F8 Parking (20-car lot)(at trailheads) 0 \$55,000.00 ea \$1,200. F8 Parking (20-car lot)(at trailheads) 0 \$55,000.00 ea \$1,200. F8 Parking (20-car lot)(at trailheads) 0 \$55,000.00 ea \$1,200. F8 Parking (20-car lot)(at trailheads) 0 \$55,000.00 ea \$1,200. F8 Parking (20-car lot)(at trailheads) 0 \$55,000.00 ea \$1,200. F8 Parking (20-car lot)(at trailheads) 0 \$55,000.00 ea \$1,200.00						
Benches (2 per mile recommended)						\$0.0
Benches (2 per mile recommended)	_	Cit Aitis				
Bicycle rack (at trailheads)			2	¢000 00	0.7	¢1 900 (
Drinking fountains, with pet fountain (1/mile)   1 \$2,000.00   ea   \$2,000.00     Picnic tables/ tables (at trailheads)   0 \$550.00   ea   \$0.00     Trash receptacles (32-gallon, steel)(at trailheads)   0 \$300.00   ea   \$0.00     Bollards (2 per trail/road intersection)   2 \$600.00   ea   \$1,200.00     Parking (10-car lot)(at trailheads)   0 \$22,000.00   ea   \$0.00     Parking (20-car lot)(at trailheads)   0 \$55,000.00   ea   \$0.00     Parking (20-car lot)(at trailheads)   0 \$55,000.00   ea   \$0.00     Parking (20-car lot)(at trailheads)   0 \$55,000.00   ea   \$0.00     Wetlands Deliniation   6,175   \$1.00   If   \$6,175.00     Geotechnical Testing   6,175   \$3.00   If   \$18,525.00     Geotechnical Testing   6,175   \$3.00   If   \$18,525.00     Subtotal   \$79,761.00     Subtotals   \$0.00   \$0.00     Signage   \$0.00   \$0.00						
Picnic tables   tables (at trailheads)   0   \$550.00   ea   \$0.						
Trash receptacles (32-gallon, steel)(at trailheads)   Sample   S						
Bollards (2 per trail/road intersection)   2   \$600.00   ea   \$1,200.						\$0.0
Parking (10-car lot)(at trailheads)   0 \$22,000.00 ea \$0.			2			\$1,200.0
F8         Parking (20-car lot)(at trailheads)         0         \$55,000.00         ea         \$0.           G         Design         Quantity         Cost         Unit         Subtotal           G1         Wetlands Deliniation         6,175         \$1.00         If         \$6,175.           G2         Geotechnical Testing         6,175         \$3.00         If         \$18,525.           G3         Construction Documents @ 12 % of Dev. Cost         12%         \$55,061.           Subtotals         Subtotal         \$79,761.           A         Demolition         \$0.           B         Off-Road Facility         \$452,627.           C         On-Road Facility         \$115.           D         Utilities         \$0.           E         Signage         \$1,100.           F         Site Amenities         \$5,000.           G         Design         \$79,761.           SUBTOTAL         \$538,603.           Contingency (15% of total)         \$80,790.	F7	Parking (10-car lot)(at trailheads)	0		ea	\$0.0
G         Design         Quantity         Cost         Unit         Subtot           G1         Wetlands Deliniation         6,175         \$1.00         If         \$6,175.           G2         Geotechnical Testing         6,175         \$3.00         If         \$18,525.           G3         Construction Documents @ 12 % of Dev. Cost         12%         \$55,061.           Subtotals           A         Demolition         \$0.6           B         Off-Road Facility         \$452,627.           C         On-Road Facility         \$115.           D         Utilities         \$0.6           E         Signage         \$1,100.           F         Site Amenities         \$5,000.           G         Design         \$79,761.           SUBTOTAL         \$538,603.           Contingency (15% of total)         15%         \$80,790.	F8	Parking (20-car lot)(at trailheads)	0	\$55,000.00	ea	\$0.0
G1         Wetlands Deliniation         6,175         \$1.00         If         \$6,175           G2         Geotechnical Testing         6,175         \$3.00         If         \$18,525           G3         Construction Documents @ 12 % of Dev. Cost         12%         \$55,061           Subtotal         \$79,761           Subtotals         \$0.0         \$0.0           B         Off-Road Facility         \$452,627           C         On-Road Facility         \$115           D         Utilities         \$0.0           E         Signage         \$1,100           F         Site Amenities         \$5,000           G         Design         \$79,761           SUBTOTAL         \$538,603           Contingency (15% of total)         \$80,790					Subtotal	\$458,842.7
G1         Wetlands Deliniation         6,175         \$1.00         If         \$6,175           G2         Geotechnical Testing         6,175         \$3.00         If         \$18,525           G3         Construction Documents @ 12 % of Dev. Cost         12%         \$55,061           Subtotal         \$79,761           Subtotals         \$0.0         \$0.0           B         Off-Road Facility         \$452,627           C         On-Road Facility         \$115           D         Utilities         \$0.0           E         Signage         \$1,100           F         Site Amenities         \$5,000           G         Design         \$79,761           SUBTOTAL         \$538,603           Contingency (15% of total)         \$80,790	G	Design	Quantity	Cost	Unit	Subtot
G2         Geotechnical Testing         6,175         \$3.00         If         \$18,525.           G3         Construction Documents @ 12 % of Dev. Cost         12%         \$55,061.           Subtotal         \$79,761.           Subtotals           A         Demolition         \$0.0           B         Off-Road Facility         \$452,627.           C         On-Road Facility         \$115.           D         Utilities         \$0.0           E         Signage         \$1,100.0           F         Site Amenities         \$5,000.0           G         Design         \$79,761.           SUBTOTAL         \$538,603.           Contingency (15% of total)         \$80,790.0						
G3 Construction Documents @ 12 % of Dev. Cost 12% \$55,061.    Subtotals   Subtotal   \$79,761.						
Subtotals       \$0.0         A Demolition       \$0.0         B Off-Road Facility       \$452,627.0         C On-Road Facility       \$115.0         D Utilities       \$0.0         E Signage       \$1,100.0         F Site Amenities       \$5,000.0         G Design       \$79,761.0         SUBTOTAL       \$538,603.0         Contingency (15% of total)       \$80,790.0	G3		-,	1		\$55,061.1
Subtotals       \$0.0         A Demolition       \$0.0         B Off-Road Facility       \$452,627.0         C On-Road Facility       \$115.0         D Utilities       \$0.0         E Signage       \$1,100.0         F Site Amenities       \$5,000.0         G Design       \$79,761.0         SUBTOTAL       \$538,603.0         Contingency (15% of total)       \$80,790.0					Subtotal	\$79 761 1
A       Demolition       \$0.0         B       Off-Road Facility       \$452,627.1         C       On-Road Facility       \$115.1         D       Utilities       \$0.0         E       Signage       \$1,100.0         F       Site Amenities       \$5,000.0         G       Design       \$79,761.0         SUBTOTAL       \$538,603.0         Contingency (15% of total)       \$80,790.0		Cubtatala			Subtotai	Ψ7.5/7.01.1
B       Off-Road Facility       \$452,627.         C       On-Road Facility       \$115.         D       Utilities       \$0.6         E       Signage       \$1,100.         F       Site Amenities       \$5,000.         G       Design       \$79,761.         SUBTOTAL       \$538,603.         Contingency (15% of total)       \$80,790.		Subtotals	+			<b>\$0.0</b>
C       On-Road Facility       \$115.         D       Utilities       \$0.0         E       Signage       \$1,100.0         F       Site Amenities       \$5,000.0         G       Design       \$79,761.0         SUBTOTAL       \$538,603.0         Contingency (15% of total)       15%       \$80,790.0	Λ	Demolition				<b>\$0.0</b>
E       Signage       \$1,100.0         F       Site Amenities       \$5,000.0         G       Design       \$79,761.0         SUBTOTAL       \$538,603.0         Contingency (15% of total)       15%       \$80,790.0						\$452,627.5
F         Site Amenities         \$5,000.           G         Design         \$79,761.           SUBTOTAL         \$538,603.           Contingency (15% of total)         15%         \$80,790.	В	Off-Road Facility				\$452,627.5 \$115.2
G       Design       \$79,761.         SUBTOTAL       \$538,603.         Contingency (15% of total)       15%       \$80,790.	B C	Off-Road Facility On-Road Facility				
SUBTOTAL         \$538,603.3           Contingency (15% of total)         15%         \$80,790.3	B C D	Off-Road Facility On-Road Facility Utilities Signage				\$115.2
Contingency (15% of total) 15% \$80,790.	B C D E	Off-Road Facility On-Road Facility Utilities Signage				\$115.2 \$0.0 \$1,100.0
	B C D E	Off-Road Facility On-Road Facility Utilities Signage Site Amenities Design				\$115.2 \$0.0 \$1,100.0 \$5,000.0 \$79,761.1
	B C D E	Off-Road Facility On-Road Facility Utilities Signage Site Amenities Design SUBTOTAL			150	\$115.2 \$0.0 \$1,100.0 \$5,000.0 \$79,761.1 \$538,603.8

Note: Does not include the following: land acquisition, potential rock and unsuitable soils excavation, permitting fees, mobilization, and taxes.

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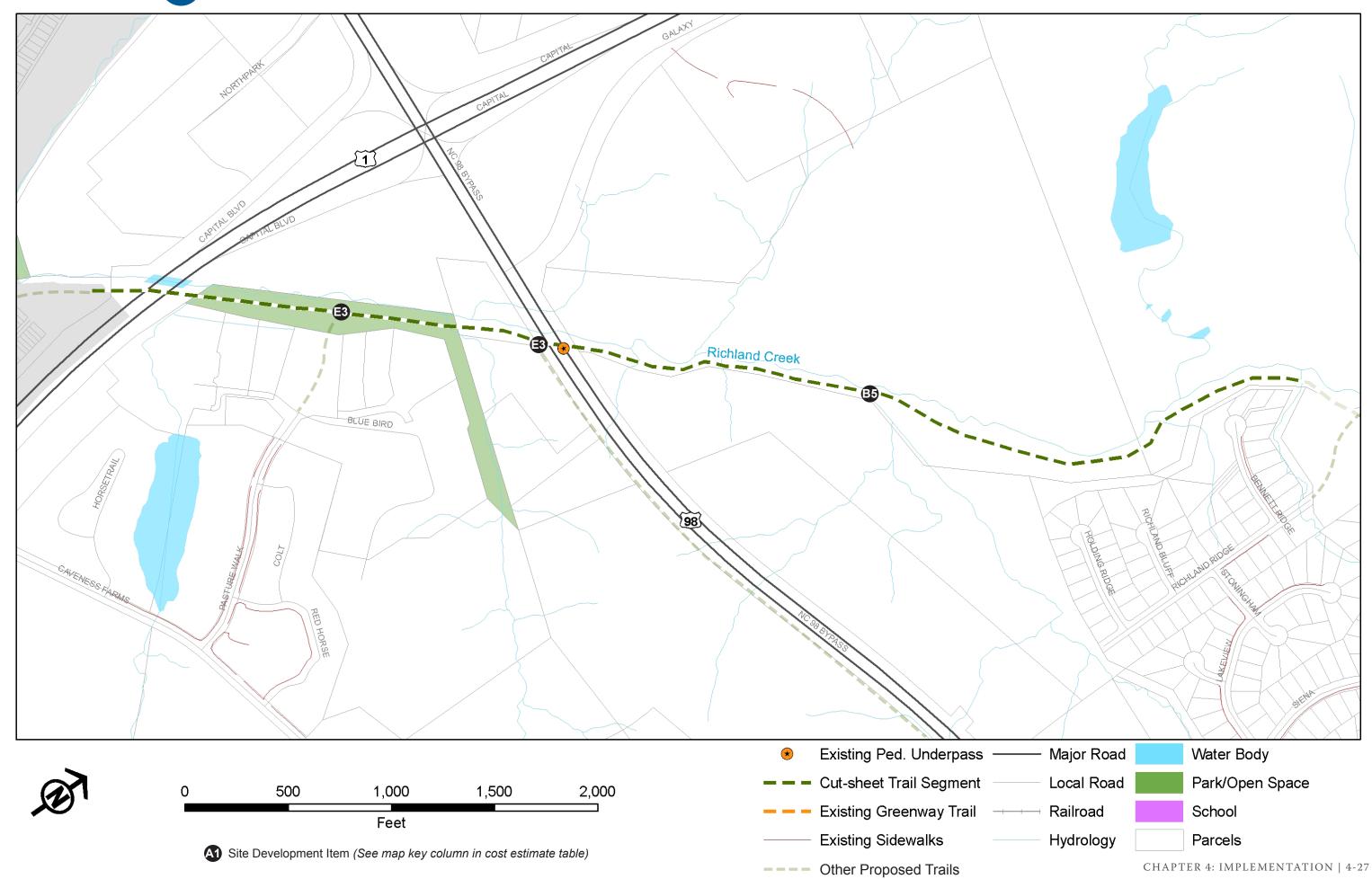


# COST ESTIMATE FOR CUT SHEET 10 RICHLAND CREEK CORRIDOR

#### (From Bennet Park Neighborhood to Villas at Caveness Farms)

Α	Demolition	Quantity	Cost	Unit	Subtota
A1	Clearing and grubbing understory (20' wide)	0	\$0.25	sf	\$0.0
A2	Dumping Fees @ 6% of Demolition total		75.25	6%	\$0.0
	Damping 1 000 @ 070 01 Domonton cocan			Subtotal	\$0.0
					•
	Site Development	Quantity	Cost	Unit	Subtota
В	Off-Road Facility (6,335 lf)				
B1	Temporary tree protection/silt fence (both sides)	9,600	\$2.00	lf	\$19,200.0
B2	Trail grading (0-5 cu ft/lf)	4,800	\$3.30	lf	\$15,840.0
В3	10' wide multi-use asphalt trail	4,800	\$50.00	lf	\$240,000.0
B4	2' wide gravel shoulder (both sides)	9,600	\$6.60	If	\$63,360.0
B5	Wooden or recycled synthetic material boardwalk	1,000	\$250.00	If	\$250,000.0
B6	Small Bike/Ped Bridge	0	\$1,350.00	lf	\$0.0
B7	Drainage culvert (36" reinforced concrete pipe)	0	\$44.00	If	\$0.0
B8	Seeding or mulching trail edges (5' both sides)	48,000	\$0.13	sf	\$6,240.00
B9	Geotextile fabric	4,800	\$1.50	lf	\$7,200.00
С	On-Road Facility				
C1	Crosswalk: Striping (High Visibility Paint)	0	\$1.60	lf	\$0.00
C2	Crosswalk: Striping (High Visibility Thermo)	0	\$4.80	lf	\$0.00
C3	Ped-activated overhead warning lights	0	Unknown	ea	\$0.00
C4	Median pedestrian refuge island	0	Unknown	ea	\$0.00
D	Utilities				
D1	Solar powered light	0	\$5,900.00	ea	\$0.00
D2	Solar powered light pole	0	\$1,420.00	ea	\$0.0
D3	Emergency phones	0	\$2,730.00	ea	\$0.0
E	Signage				
E1	Mile Markers	1	\$220.00	ea	\$220.0
E2	Trail and street regulatory/warning signs	0	\$220.00	ea	\$0.0
E3	Directional signs	2	\$220.00	ea	\$440.0
E4	Educational signs	0	\$330.00	ea	\$0.00
F	Site Amenities				
F1	Benches (2 per mile recommended)	2	\$900.00	ea	\$1,800.0
F2	Bicycle rack (at trailheads)	0	\$225.00	ea	\$0.0
F3	Drinking fountains, with pet fountain (1/mile)	1	\$2,000.00	ea	\$2,000.0
F4	Picnic tables/ tables (at trailheads)	0	\$550.00	ea	\$0.0
F5	Trash receptacles (32-gallon, steel)(at trailheads)	0	\$300.00	ea	\$0.0
F6	Bollards (2 per trail/road intersection)	0	\$600.00	ea	\$0.0
F7	Parking (10-car lot)(at trailheads)	0	\$22,000.00	ea	\$0.0
F8	Parking (20-car lot)(at trailheads)	0	\$55,000.00	ea	\$0.0
				Subtotal	\$606,300.00
G	Design	Quantity	Cost	Unit	Subtota
G1	Wetlands Deliniation	4,800	\$1.00	lf If	\$4,800.0
G2	Geotechnical Testing	4,800	\$3.00	If	\$14,400.0
G3	Construction Documents @ 12 % of Dev. Cost	1,220	, 0	12%	\$72,756.0
				Subtotal	\$91,956.00
	Subtotals			3020001	+22/200100
A	Demolition			1	\$0.0
В	Off-Road Facility				\$601,840.0
C	On-Road Facility			<del>                                     </del>	\$0.0
D	-	<del> </del>			
	Utilities				\$0.0 \$660.0
E F	Signage Site Amonibies				\$660.0
	Site Amenities				\$3,800.0
		1 1			\$91,956.0
G	Design		+		
	SUBTOTAL				\$698,256.0
	-			15%	\$698,256.00 \$104,738.40 \$802,994.40

Note: Does not include the following: land acquisition, potential rock and unsuitable soils excavation, permitting fees, mobilization, and taxes. Cost estimate for Capital Blvd (US-1) underpass also not included.





# (From Smith Creek Greenway to Marshall Farm Road)

<u>чар кеу</u> <b>А</b>	Demolition	Quantity	Cost	Unit	Subtotal
A1	Clearing and grubbing understory (20' wide)	40,000	\$0.25	sf	\$10,000.00
A2	Dumping Fees @ 6% of Demolition total			6%	\$600.00
				Subtotal	\$10,600.00
	Site Development	Quantity	Cost	Unit	Subtotal
	Site Development	Quantity	COST	Onic	Subtota
В	Off-Road Facility (5,240 lf)				
B1	Temporary tree protection/silt fence (both sides)	9,480	\$2.00	lf	\$18,960.00
B2	Trail grading (0-5 cu ft/lf)	4,740	\$3.30	lf	\$15,642.00
В3	10' wide multi-use asphalt trail	4,740	\$50.00	lf	\$237,000.00
B4	2' wide gravel shoulder (both sides)	9,480	\$6.60	lf	\$62,568.00
B5	Wooden or recycled synthetic material boardwalk	500	\$250.00	lf	\$125,000.00
В6	Small Bike/Ped Bridge (3)	30	\$1,350.00	lf	\$40,500.00
В7	Drainage culvert (36" reinforced concrete pipe)	0	\$44.00	lf	\$0.00
B8	Seeding or mulching trail edges (5' both sides)	47,400	\$0.13	sf	\$6,162.00
B9	Geotextile fabric	4,740	\$1.50	lf	\$7,110.00
С	On-Road Facility				
C1	Crosswalk: Striping (High Visibility Paint)	0	\$1.60	If	\$0.00
C2	Crosswalk: Striping (High Visibility Thermo)	24	\$4.80	if	\$115.20
C3	Ped-activated overhead warning lights	1	Unknown	ea	\$0.00
C4	Median pedestrian refuge island	1	Unknown	ea	\$0.00
<b>D</b>	Utilities Solar powered light	0	\$5,900.00		\$0.00
D1	Solar powered light pole	0	\$1,420.00	ea ea	\$0.00
D3	Emergency phones	0	\$2,730.00	ea	\$0.00
	Zindigency phones		Ψ27700.00		Ψ0.00
E	Signage				
E1	Mile Markers	1	\$220.00	ea	\$220.00
E2	Trail and street regulatory/warning signs	2	\$220.00	ea	\$440.00
E3	Directional signs	2	\$220.00	ea	\$440.00
E4	Educational signs	3	\$330.00	ea	\$990.00
F	Site Amenities				
F1	Benches (2 per mile recommended)	2	\$900.00	ea	\$1,800.00
F2	Bicycle rack (at trailheads)	0	\$225.00	ea	\$0.00
F3	Drinking fountains, with pet fountain (1/mile)	1	\$2,000.00	ea	\$2,000.00
F4	Picnic tables/ tables (at trailheads)	0	\$550.00	ea	\$0.00
F5	Trash receptacles (32-gallon, steel)(at trailheads)	0	\$300.00	ea	\$0.00
F6	Bollards (2 per trail/road intersection)	2	\$600.00	ea	\$1,200.00
F7	Parking (10-car lot)(at trailheads)	0	\$22,000.00	ea	\$0.00
F8	Parking (20-car lot)(at trailheads)	0	\$55,000.00	ea	\$0.00
				Subtotal	\$520,147.20
G	Design	Quantity	Cost	Unit	Subtota
G1	Wetlands Deliniation	4,740	\$1.00	If	\$4,740.00
G2	Geotechnical Testing	4,740	\$3.00	If	\$14,220.00
G3	Construction Documents @ 12 % of Dev. Cost	7,740	ψ3.00	12%	\$62,417.66
				Subtotal	\$81,377.66
	Subtotals				
Α	Demolition				\$10,600.00
В	Off-Road Facility				\$512,942.00
	On-Road Facility Utilities				\$115.20
D E	Signage				\$0.00 \$2,090.00
F	Site Amenities				\$5,000.00
G	Design				\$81,377.66
	SUBTOTAL				\$612,124.86
				1 50/	
	Contingency (15% of total)			15%	\$91,818.73

Note: Does not include the following: land acquisition, potential rock and unsuitable soils excavation, permitting fees, mobilization, and taxes.

